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ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE NEUROTIC ORIGIN OF CLUB-FOOT, INFANTILE PARALYSIS, AND LATERAL SPINAL CURVATURE; AND ITS RELATIONS TO PROGNOSIS.

Delivered at the Pennsylvania Hospital

BY THOMAS G. MORTON, M.D.,

One of the attending Surgeons.

GENTLEMEN,—At our last meeting I promised that I would show you this morning some cases illustrating the results of nerve-lesions, especially upon the nutrition of the parts to which the nerves are distributed. Let me first direct your attention to the cases before you, which, however, are not strictly of the class of lesions of nerves. They illustrate, to a marked degree, atrophy following club-foot, atrophy not confined to the muscles, but involving all the structures, including the bone, as the result of impaired nutrition. The affected leg, as you see in each of these children, is poorly developed, and is less than the sound leg not only in its thickness, but in its circumference.

I believe that club-foot is the result of a cerebro-spinal defect,—that is to say, at some point in the brain or along the spinal cord there is a lesion which reduces the nerve-supply of a group of muscles, and subsequently impairs the growth of the affected part. During fœtal development, at some period, there has been a disorder of the nervous system which has produced the club-foot. I have seen nothing in my experience to warrant the idea that congenital club-foot has ever been caused by spasm of the muscles, or by position in utero.

In connection with a case recently before you (of pericoxalgia), I told you that whenever there is inflammation involving the nerve-trunk you must expect to have atrophy in the limb; not absolute, but relative, as compared with the other extremity. Remember to warn your patients of this, for it occurs in every case of well-marked hip-joint disease as the result of want of nutrition, and this condition will remain and cause more or less permanent deformity.

Wherever nerve-filaments are included in a focus of inflammation there will be a certain degree of sclerosis of the nerve, or a degeneration extending up towards the spinal cord. As a result there is defective nutrition, owing to central change, from extension of the process into the motor area in the anterior columns of the cord. The child may grow well elsewhere in all portions of its body, but the structures of the limb—the bone, muscles, and skin—show defect of growth. Of course, if you examine a case of hip-disease, you will not expect that you will be able in the very early stage to find this atrophy, but in the course of time it will become evident.

Let me show you this boy, 10 years of age, who came to me a year ago for treatment. I find upon applying the tape that the right leg measures around the calf ten and one-quarter inches; the left, barely nine and one-quarter inches. By noticing carefully the boy's feet, you will also observe the difference in the length of the feet, the right being nearly an inch longer than the left. This is not because he has had simply a disease of the bone,—for you will often find, after a resection of the humerus in which a large amount of the bone was removed, that the growth of the lower portion goes on as before,—but it is because there has been an inflammation which has affected the nerve-supply, a process of sclerosis in the nerve-trunk interfering with function. It might be urged that this atrophy has been caused by want of use; but that would not apply to the diminished length of the leg and foot.

I need hardly say to you that in a case of coxalgia, if you can arrest it in its early stage, with as yet very little inflammation of the surrounding structures, the result, as regards the future usefulness of the limb, will be better than if the disease had been allowed to go on. There will be a less amount of atrophy, and perhaps, if the nerve-trunk escapes, none at all. Therefore you should make special efforts to arrest the disease early, in order to secure the growth and usefulness of the limb.

This little girl, 12 years of age, had hip-joint disease about a year ago. The left calf now measures seven inches, the right seven and a half. A greater difference is found in the measurement of the thighs at the upper half, where it is an inch and a half. This is the usual history of a case

tion has been made by the camel's-hair brush directly to the spot to be anæsthetized, and this operation repeated two or three times, if necessary, at intervals of five minutes. The conclusions of the observer are as follows:

1. In operations on the membrana tympani, the anæsthetic action of cocaine (five-per-cent. solution) is uncertain.

2. In operations on the tympanic mucous membrane, cocaine has an anæsthetic effect. It fails, however, if the cut be deep enough to invade the subjacent bone.

3. In operations on the nasal mucous membrane, cocaine has both an anæsthetic effect and one which abrogates the reflex susceptibility.

4. In rhinoscopy, cocaine allays gagging and relaxes the soft palate.

In this connection, attention is drawn to the anæsthetic effect of brucine in painful affections of the ear, as first announced by the reporter in a paper read before the American Otological Society at New London, July 12, 1885, entitled

THE LOCAL USE OF COCAINE AND BRUCINE IN DISEASES OF THE EAR,

in which he stated an experience of negative results with cocaine as an anæsthetic in the ear, but reported very good results from applying five-per-cent. solutions of brucine to the ear. Its application as a local anæsthetic to the ear was tried in the Philadelphia Polyclinic at the suggestion of Dr. Thomas J. Mays. The solution employed was five per cent. of brucine, to which hydrochloric acid had been added in the proportion of five drops to the gramme; and in all the cases treated with this preparation of brucine the relief to pain had been prompt and complete, a result far more satisfactory than any obtained by him in the ear by solutions of cocaine. The applications to the ear were made by means of cotton on the cotton-holder, soaked with the solution of brucine.

Kirchner (*Deutsche Med. Wochenschrift*, No. 4, 1885) began with a two-per-cent. solution of cocaine, but found that nothing short of a twenty-per-cent. solution was sufficient to produce anæsthesia of the membrana tympani. But even with this the result is by no means sure,—an experience similar to that of Zauful (*Präger Med. Wochenschrift*, No. 7, 1885). The latter has had negative results in producing anæsthesia with solutions of cocaine in the membrana tympani; but he has found that in large perforations of the membrana the mucous membrane can be reached and anæsthetized by cocaine, so that granulations can be removed without great pain (*Archiv f. Ohrenheilk.*, Bd. xxii. p. 284, August, 1885).

INTRA-PETROUS GANGLIA OF THE AUDITORY NERVE.

Vulpian presented to the Académie des Sciences, March 24, 1885, for G. Ferré, an account of investigation on the above-named subject (*Annales des Maladies de l' Oreille*, etc., Juillet, 1885).

These ganglia are three in number: one is situated on the vestibular nerve (ganglion of Scarpa), the second upon the external fasciculus of the expansion of the cochlear nerve, and the third is arranged spirally the entire length of the lamina spiralis (this is the ganglion of Rosenthal or of Corti). All the branches issue from the auditory nerve and pass thence through a collection of ganglion-cells. This cellular mass or cushion is unique, as ganglionic nerve-cells are not found in the terminations of the auditory nerve. The three nervous ganglia thus form a zone of cells analogous to that found in the retina, probably to that composed of multipolar cells.

PSEUDO-MENINGITIS OF YOUNG DEAF-MUTES.

Dr. Boucheron, in the *Revue de Médecine*, May 10, 1885, under the above title has presented an account of a grave complication of otitis media in infancy (*Annales des Maladies de l' Oreille*, July, 1885). This consists in a destruction of the labyrinth-nerves by compression, the result of the forcing inward of the foot-plate of the stapes. The clinical forms of the otitis media are variable, sometimes being accompanied by general symptoms of a grave nature, as convulsions, coma, and fever, so that the physician might well suppose he had to deal with a meningitis, were it not for the fact that an otitis is always attended with deafness, and also were it not for a pathognomonic fact of differential importance,—that the inflation of the tympanum dissipates the alarming symptoms. In some cases the lesions occur without marked symptoms in the early months or years of life. The child, hitherto lively and intelligent, becomes suddenly dull and irritable, and loses its hearing. It ceases to learn to

talk, or ceases to use the speech it may have learned, and thus becomes a mute. This may be brought about without any marked symptoms or convulsive phenomena and fever, *so that one may be inclined to think such children deaf-mutes from birth, whereas their deaf-dumbness is truly an acquired one and consecutive to an otitis media.*

No matter what may have been the course of the symptoms, these children are deaf in proportion to the lesion of the internal ear, the result of compression. In almost all of them the membranæ are found sunken, and there are signs of naso-pharyngeal and tubal catarrh, the primordial cause of the disease. It is well known that the offspring of consanguineous marriages are often deaf and dumb. These unfortunates represent the confluence of diathetic naso-pharyngeal and tubal catarrhs of their progenitors, rather than cases of degeneration.

Treatment.—In respect to prognosis and treatment, it may be said the first depends largely on the second, which must consist primarily in treating the naso-pharyngeal catarrh, and in the use of tympanic inflations.

We must express great surprise at and disapproval of the suggestion of Dr. Boucheron to chloroformize all patients in order to insert the Eustachian catheter. It is quite as surprising and seems as unskilful as would be the suggestion to etherize the patient before introducing the vesical catheter.

ABSOLUTE UNILATERAL DEAFNESS FOLLOWING MUMPS.

Dr. Ménière (*Société Française de Laryngologie et d' Otologie*, April 2, 1885) reports two cases of deafness in one ear supervening upon mumps. He supposes that in all cases of deafness thus supervening upon mumps there is always a lesion of the meninges, the symptoms of which may be so evanescent, occurring at night, as to escape the attention of the friends and physician of the patient. He holds that the process is similar to that which he has observed in children who become deaf-mutes between the ages of one and five years, and in whom the cerebral involvement appears suddenly in the night, but is rapidly dissipated by morning. The event corresponds, in his opinion, with dentition.

AURAL DISEASE IN DIABETES MELLITUS.

The discussion of this subject is again broached by Kirchner (*Monatsschrift für Ohrenheilkunde*, No. 12, 1884), who claims that in this disease of the kidneys it is not uncommon to observe symptoms of catarrhal otitis media. It is usually consecutive to naso-pharyngeal catarrh, to which diabetic patients are generally liable. It may also arise, especially in the aged, from circulatory disturbances due to arterial sclerosis. The impaired vitality of the diabetic is used to explain the facility with which purulent inflammations arise in them, with their extensive and rapid effects.

An account of a case is then given, that of a young man, 22 years old, suffering from diabetes, and in whom there suddenly occurred in the right ear intense pain. There was found a marked otitis media, which necessitated a paracentesis of the membrana tympani. In the next few days there occurred a spontaneous rupture of the left membrana, which had been seen to be deeply congested at the time of the first examination. Suppuration continued in both ears until death occurred. Six weeks after the beginning of the aural disease there ensued a redness of the mastoid and a swelling from the tip of the latter towards the lower jaw, in consequence of which Dr. Kirchner felt justified in surgical interference. He met, at the point of the mastoid process, a small fistulous opening, which he made wider by chisel and gouge. Five days after the operation death ensued, being preceded by considerable sphacelus in the wound. The post-mortem examination showed that the right mastoid process formed one large cavity, and that the sigmoid fossa was perforated from the upper edge of the petrous pyramid throughout its entire length. On the left side the destructions were nearly of the same extent. Kirchner wisely advises to abstain from operating on diabetic patients except in the most urgent cases.

AUDITORY DISTURBANCES CAUSED BY EXPOSURE TO THE DISCHARGE OF FIREARMS.

Dr. Boucheron, of Paris (*Revue Mensuelle d' Otologie*, etc., May, 1885) has examined into cases of aural compression in adults, caused by the detonation of firearms. It is stated that very often the surgeon meets cases of deafness in those who have been

using firearms. In such cases it is held that at the moment of the accident—*i.e.*, at the moment of the impact of air from the concussion upon the membrana—there is an obstruction in the Eustachian tube. The concussion of the surrounding atmosphere induces sudden compression of that enclosed in the drum-cavity, and, secondarily, a compression of the nerves in the labyrinth. If the lesion be slight, the hardness of hearing is transitory; if it be more intense, the nerve-filaments are destroyed and the hardness of hearing is permanent. In those individuals exposed to analogous noises, such as boiler-makers, similar accidents are met with, but only where there is obstruction of the Eustachian tubes from precedent catarrh.

A prophylactic measure recommended consists in advising boiler-makers, artillerists, and those similarly exposed to great noises, to make efforts at deglutition (which tend to open the Eustachian tubes) before being exposed to violent noises or explosions.

The curative treatment consists in inflating the tympanum, in order to restore the membrana tympani to its normal position and thus put an end to the compression.

CHOLERA ASIATICA.

Read before the Microscopical and Biological Section of the Academy of Natural Sciences

BY W. XAVIER SUDDUTH, M.D.,

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IT would be unnecessary and presumptuous for me to enter into any lengthy description of the ravages of cholera or its clinical history. Our knowledge in the past has been mainly confined to those phases of the disease. What I have to present to-night will in the main refer to some new light that has been thrown on its etiology; although there yet remains considerable to be cleared up with regard to discoveries which have recently been made.

Cholera is an endemic disease in India, and has repeatedly spread westward in the form of epidemics, none of which have exceeded its first advent in 1817, when it visited nearly every portion of the inhabited globe. It again made its appearance abroad, and first found its way to the United States, in 1832, and again in 1834. Subsequently it has visited our country in 1849, lasting till 1852; and again in 1866–67; and, lastly, in 1873. It is on its march again, and may reach here some time during the heat of summer.

One feature especially noticeable about its travels is that it has never shipped aboard the vessels rounding the Cape of Good Hope, or, doing so, it has worn itself out during the passage; the discipline, good hygiene, and regular diet subserving to good health during this long voyage and seeming not to form a suitable field for its propagation. Born and nurtured in the filth of the thickly-populated East Indian countries, it travels by short stages, following the lines of commerce, its spread being, beyond doubt, by actual contact. It is not carried by the trade-winds, nor is it contagious in the same sense as smallpox, scarlet fever, or measles. It is conveyed both by drinking-water and by food. History gives ample proof of its communicability by soiled linen, sewage, etc. It is a respecter of no age, sex, or condition in life. In its ravages it cuts down the rich as well as the poor; but its fatality is greatest among the intemperate. Its ravages are most marked in hot, moist climates, low rather than high altitudes, and the summer rather than the winter season.

Living in badly-drained, crowded cities, eating improper food, all manner of excesses, and mental depression, predispose to cholera. Lastly—and, I consider, *mostly*—is a previous epidemic of sporadic cholera dysenterica. Our British cousins learned this lesson long ago, and have profited by their knowledge: they instituted a strict surveillance over the city of London when it appeared, dividing it into districts in which physicians, officially appointed, were daily to visit and personally examine those living in them, and treat every case of dysentery found. Drawing their conclusions from the results obtained by this course of treatment, some English authorities are loud in their assertions that epidemic cholera is only an aggravated form of dysentery. It was an excellent line of procedure, and they builded better than they knew. We accept their treatment, but, in doing so, claim that it is only precautionary treatment and useful only in that it lessens the liability to infection.

For the propagation of any bacterium,

four things are essential: 1, a living germ; 2, depressed or decaying organic matter; 3, heat; and, 4, moisture. The germs of disease, micrococci, are ever present in the air we breathe, the water we drink, and the food we eat; and yet we live,—and why? Because not all the essentials for the propagation of disease are present at one and the same time in our bodies. Yet in your and my mouth to-night are probably germs that, if injected into the circulation, would cause death in a few days. The experiment of inoculating rabbits with normal human saliva has been tried often, and often resulted fatally. In normal epidermis and mucous membrane nature has provided a coat of mail against the entrance of these germs of disease into the circulation; but when these surfaces become abraded or their *vis vitæ* lowered from any cause, and the other essentials for the propagation of any specific germ that may be present are not wanting, then we have that special disease developed. When the germ-theory was first promulgated there were many who doubted, and there are yet, for that matter. They seem to clog the wheels of scientific progress, but in reality they only make the foundations of science firmer; and, although they may attain an ephemeral notoriety by boldly denying and demanding more proof, yet, in the end, the very opposition sets the true scientist to work to prove his views. Those who have been the leading believers in the germ-theory have had an especially hard hill to climb. If you take into consideration the small number of physicians who are experts in the use of the microscope, and then think of the vast number who have to depend on these few for their light in this investigation, it is really surprising that the theory has gained ground so rapidly as it has. It has had to fight every inch of the way. The masses of the profession have not been satisfied with the persistent discovery of the same form of bacilli in a certain disease, but he who found it must be able to cultivate it through successive cultures, and by inoculation on animals reproduce the disease.

Regarding the etiology of cholera, until the last twelvemonth all efforts to discover its specific cause, either in the air or in dejections of patients affected with cholera, had proved futile. The leading scientists of the day had to admit the plausibility of the application of the germ-theory in order to account for the origin and epidemicity of the disease. The germs evidently were capable of self-multiplication outside of the body; but all the known methods that could be brought into use for their demonstration failed to discover them.

The difficulties seemed insurmountable until Dr. Koch, stimulated by the oft-repeated failures of others, determined to go to Egypt and begin his investigations, and, if need be, follow the epidemic up to its home in India. He had not been long there until he reported that he had discovered a new genus of bacilli in the water-tanks of that country. Soon followed the finding of these in the intestines of patients who had died with cholera. He returned home, and began a series of experiments on animals with pure cultures. These results were negative at first, and he only partially succeeded in thus reproducing the disease.

When the epidemic broke out in France, it found Koch still hard at work trying to unravel the mysteries that surrounded its reproduction, by inoculation, on the lower animals. The French authorities sent for him to come to France, and, if possible, institute some methods that would ameliorate the ravages of the dreaded scourge. Soon after his arrival in Toulon a patient in the hospital sickened and died with cholera. This was a particularly favorable case for investigation, and, as the slide I have to show you to-night is made from a pure culture-solution obtained from this patient, the history of the case will interest you.

The patient was by occupation a sailor; had been admitted to the hospital for an attack of typhoid fever, but was convalescent, and was to have been discharged at noon. At 10 A.M. he was seized with cholera and died at 11 A.M., and within five minutes thereafter the autopsy was made and some of the contents of the small intestines examined. The same bacilli were found that had been previously discovered by Koch in India. Still the problem remained unsolved. Koch fully believed that he had made the long-wished-for discovery, but it remained to be proved. He cultivated this latter material up to the thirteenth generation, if I mistake not. In his experiments on the different media he found that the comma-bacilli (as he has termed them, from their resemblance to

a German comma) developed very characteristically on solid media, and liquefied the gelatin-culture media in a peculiar manner. They also grew very rapidly in bouillon, milk, serum, potatoes, and Japanese isinglass. Dr. Koch found out one very essential point in the culture of the comma-bacilli, and that was that the very greatest care must be observed in neutralizing the acidity of the bouillon, the presence of the least trace of acid being sufficient to prevent their development. In suitable media the comma-bacilli proliferate with remarkable rapidity at a temperature of from 86° to 102° F. They resist a very low temperature, +15° F. When the conditions are suitable for their development they multiply very rapidly, sometimes assuming the form of spirilla: in fact, they very much resemble the genus *Spirillum* in more ways than one. They are individually exceedingly short-lived. They also develop rapidly on soiled linen and in damp earth.

Koch's method of cultivating the bacilli is about as follows: "A small quantity of gelatinized pepton bouillon is inoculated with a little of the slime taken from the small intestine near its termination at the cæcum. The bouillon is then warmed until it becomes fluid, when it is poured on to a sterilized glass plate and spread with a sterilized glass rod. This is protected from the air by placing it underneath a bell-glass. The air within is kept moist by water-soaked blotting-paper. In a short time the colony develops, first as an irregularly-shaped pale spot on the surface of the gelatin. This soon assumes a granular appearance, and looks not unlike small particles of glass. As development progresses, the colony sinks into the gelatin, by reason of the liquefaction of the media. The colony then presents as a whitish spot under the surface of the gelatin."

At first Koch failed to reproduce the disease in animals, as he afterwards found, because of the acid condition of the gastric juice in health. He has now succeeded in producing the disease in all its virulence by ligating the pylorus and introducing the germs into the duodenum. The passing of the germs through the human stomach is accounted for by the fact that the gastric juice is not in its normal condition at the time of inoculation. To demonstrate the comma-bacillus in the tissues of the body, harden small pieces of the small intestine in alcohol and then stain in methyl blue. The bacilli will be found in the glands. They have never been found in the blood. They are quickly killed by drying. Koch's favorite method of staining them is with an aqueous solution of fuchsin. They are best examined with the aid of an Abbe condenser and a high-power objective.

Treatment is based on the following facts: first, the most probable source of contagion is the water-supply; second, the germs find a suitable field for development in the intestines of those who have had a previous attack of sporadic cholera; third, the presence of an acid is inimical to the development of the germs; and, lastly, long sea-voyages seem to militate against the continuance of the disease, hence the feasibility of quarantine.

From the foregoing we deduce the following suggestions as regards treatment, or rather prevention:

1. In the advent of cholera, all traps and drains should be overhauled, and a pure supply of water should be obtained. In the absence of ability to comply with the latter, none but sterilized water—that is, water which has been recently boiled—should be drunk. Ice should not be put in the water-pitcher, but the water-pitcher should be placed in the ice-box.

2. Careful attention should be given to the diet. Only such food should be eaten as does not tend to cause cholera morbus. All excesses should be avoided, and the first sign of dysentery should be noted and prompt measures adopted to check it. An acid lemonade composed of dilute hydrochloric acid and distilled water, in the proportion of six parts to thirteen, should be kept in the house, and may be taken *ad libitum*.

3. A rigid quarantine should be instituted on all incoming vessels from ports where the epidemic prevails. This quarantine should apply not only to passengers, but to freight also. No vessel should be allowed to discharge her cargo under thirty days. The laws regarding the importation and disinfection of rags should be rigidly enforced.

These deductions have been made not from personal experience in the treatment of the disease, but from a close study of the clinical history and the latest published facts regarding the comma-bacillus. The specimen which I have the pleasure of showing you this evening is from a pure

culture made by Koch himself. It is stained with fuchsin, and the bacilli appear in the form of short, curved objects, varying from one-eighth to one-half the width of a blood-corpuscle. They are magnified about seven hundred and fifty diameters.

A REPORT OF SIX HUNDRED CASES OF LABOR.

Read before the Philadelphia County Medical Society, September 23, 1885,

BY H. LEAMAN, M.D.

FROM the brief notes I have preserved of the last six hundred cases of labor which I have attended I have taken the material for the report which I now present to you, which, I hope, will at least have the merit of bringing some important topics before us for discussion.

The average duration of each labor was fourteen hours and forty minutes. The average duration of first labors, which numbered one hundred and eighty-seven, was twenty-two hours. Of these, there were five recorded of over thirty years of age, with an average duration of twenty-five hours.

The difference of opinion that exists on the duration of labor doubtless arises, as has been stated, from the difficulty in determining the limit of the first stage. There is a difference in women as to the accuracy with which they record their internal sensations. Some are cognizant of the slightest nerve-impression and can state it with exactness; others are dull and only aroused by a decided sensation, and are inaccurate in their report.

Multiparæ are very apt to be inaccurate in their statements as to the time of the onset of the first stage. They will very frequently reply, when questioned, that they have had slight pains for several days, but have taken no account of them. Primiparæ are more certain in their observations, as they are in a state of expectancy.

The length of labor has been counted, in all cases, from the first onset of dilating pain, which is generally felt in the lumbar, supra-pubic, or sacro-iliac regions, and is accompanied by dilatation of the cervix. The termination of labor has uniformly been carefully noted at the time of the delivery of the head.

The first stage of labor may be said to vary in length from two or three hours to two or three weeks. The second stage of labor is a more constant quantity, and extends in duration from half an hour to four hours. The first stage of labor is the process by which the uterus is prepared for the expulsion of its contents; the second stage is labor proper, and is a more definite quantity. Allowing two hours for rotation and two hours for dilatation of the perineum, we have four hours as the maximum limit for this stage. The exact time of separation of the limits of the first and second acts of labor cannot always be easily determined. The importance of distinguishing this stage, however, cannot be too earnestly urged, for it is at this point that mistakes are made and the forceps often injuriously applied. Full dilatation having occurred, delay beyond three or four hours may endanger both the fœtus and the mother.

The hour of day at which delivery occurs is worthy of note. In my list, out of six hundred cases, three hundred and nineteen were born between the hours of 6 P.M. and 6 A.M.; ninety-five were born between 12 midnight and 4 A.M.; one hundred and thirty-three between 4 A.M. and 8 A.M.; and one hundred and twenty from 8 P.M. to 12 midnight. The greatest number of births during one hour was forty, between 7 and 8 A.M.; the least was twelve, between 12 noon and 1 P.M.

Six hundred cases are too few to determine anything positively, but may be sufficient to draw an inference. The uterine force rises, falls, and rests. There would seem to be some relation between labor-pains and the pressure of the blood in the arteries. When labor is progressing in a strong, healthy woman, it may terminate any hour. But if there is a lack of easy adjustment between the pelvic environment and the fœtus, or an unfavorable presentation, then the arterial pressure comes into consideration. This is also indicated by the prevalent use of drinks during the progress of tedious delivery.

Position and presentation were observed in five hundred and sixty-eight cases, thirty-two being born before I was able to reach them. Vertex left front was present in three hundred and seventy-six; vertex right posterior in ninety-five; vertex right anterior in fifty-three; vertex left posterior in twenty-three; breech-presentations occurred in eighteen, face- in two, shoulder- in one.

Of the four hundred and twenty-nine vertex front presentations, two rotated into the hollow of the sacrum and were born vertex over the perineum; the remainder all rotated under the pubes. Of the one hundred and eighteen vertex posterior presentations, in one the chin dropped and became a face-presentation; twenty-one rotated into the hollow of the sacrum and were born over the perineum (ten of these twenty-one were delivered necessarily by the forceps); ninety-seven rotated under the pubes (of these only six were delivered with forceps). I am inclined to think vertex posteriors must have given rise to the invention of the forceps.

The forceps were applied in ninety-four deliveries. Twice they were applied because the obstetrician was compelled to hurry in order to attend to something else, although this ought never to be done; twenty-five times merely to aid in the exit of the head; in sixty-seven cases they were applied to relieve from painful and protracted labor. The reasons given for their use were contractions of the superior strait; large heads and bodies; firm heads with closure of the fontanels; obesity and weak abdominal muscles; and vertex posterior, particularly when rotation takes place into the hollow of the sacrum.

The breech-position was present in eighteen. Of these, eight presented sacrum to the back; sacrum to the pubes in four; sacrum to left in five; sacrum to right in one. Two of these were born dead.

There were two face-positions. One of these was born dead, but previously had been driven down in the pelvis for two or three hours by ergot administered by a midwife. The other was turned and delivered alive.

The sequelæ of these labors were rupture of the perineum in fifty-three: twenty-seven of these were slight, twenty-six were sewed with two or three sutures. Of these, twenty did well and healed perfectly. The usual efforts to prevent this trouble were used in all but twelve. These twelve were born in my absence. The rupture occurred uniformly with the head-position. In one case the tear was due to syphilitic warts, and in another to a large caruncle. Frequently it is caused by too rapid termination of the second stage of labor. Frequently the perineum itself is at fault, from a lack of development.

There were nineteen still-born children. Death was apparently due in two to prolapse of the cord; in one to too long use of ether; in two to too much ergot; and in one to convulsions. The majority were due to causes unknown. There were three cases of puerperal fever, and all died. One woman was taken with variola, miscarried, and died, at about the seventh or eighth month. One was taken with scarlet fever on the second day after delivery, and died on the eleventh day of the eruption. Four had metritis, one pyæmia, one mania. One had an intercurrent attack of facial erysipelas, but no metritis. Pleurisy occurred in one case. Inversion of the uterus took place in one case (it was not produced by the attendant): the symptoms were rapid fainting and severe uterine contractions. Post-partum hemorrhage was unknown in this series of cases.

This review, imperfect as it is, is presented in the attempt to elucidate some facts which are so familiar as to be overlooked. The most important fact connected with the subject of labor is the force exerted by the uterus in expulsion of its contents. The law of labor is the law of the uterus. The question for the obstetrician is not merely how to "get it out," but, under the circumstances, how the fœtus can best be born. The estimates of the force exerted by the uterus usually given seem to me to be exaggerated.

Meadows, for instance, sets down the involuntary or uterine force at 3.4 pounds to the square inch; voluntary or abdominal, as given by Houghton, 38.6 pounds. The two actions in labor seem to be direct and indirect. Their action is similar to that of the direct and indirect muscles of inspiration. The direct muscle is the uterus. The indirect are the abdominal muscles and diaphragm. We may add also accessory indirect, as muscles of the extremities and the thoracic muscles. The action of the indirect and accessory indirect is simply to fix the uterus and conserve its energy: the expulsive effort is applied by the uterus in such a manner as to impel the child, by gentle and vermicular movements, to elongate and mould its presenting part, and finally deliver it through nature's viaduct.

During the past year I have used a pressure-gauge with marked satisfaction. With it I have been able to determine when it was necessary to break the waters. It has enabled me to determine the complete

dilatation of the cervix. It also aids us in determining the necessity for forceps; and, in short, it gives exactness to our observation of a case of labor. The hand may determine the presence of heat in the fever-patient, but the thermometer alone gives definiteness to the idea of temperature. A skilled obstetrician may know the progress of labor, but dynamometry offers him greater accuracy in determining the rate of descent of the fœtus.

In my experience I have seen but once or twice a purely natural and physiological labor,—*i.e.*, the expulsion of the ovum in its entirety (placenta, child, and fluid in the unruptured membrane). Ordinary labor as described is a modification of this, although the essential elements are the same. There is the mass of the fœtus, flexible and readily compressible during delivery; the water first escapes, while the placenta, really separated with the other elements, is ready to follow immediately after the child.

828 North Broad Street, Philadelphia.

SUDDEN DEATH FROM ŒDEMA OF THE GLOTTIS.

BY W. J. JONES, M.D.,

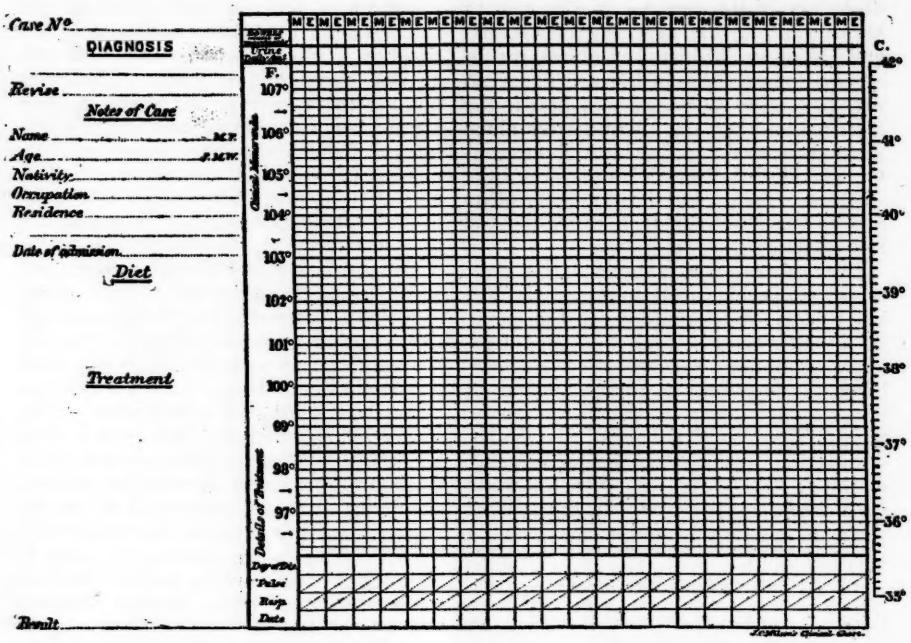
Resident Physician at Bay View Hospital, Baltimore.

THE following case will serve to show the clinical significance and pathological condition of œdema of the glottis.

J. B., colored, male, æt. 52 years, was admitted into the hospital at Bay View Asylum on the 24th of May last. He gave a history of having been a hard-working laboring-man, and the duties of his vocation often subjected him to considerable exposure. He was addicted to drinking a little too freely of alcohol at times, though not a constant drinker. He denied the history of any venereal disease. A careful physical examination of the patient showed that he was a large, well-built man. He gave no evidence of any disease of his lungs or heart. There was slight œdema of his lower extremities, which was not constant. An examination of his urine showed the presence of albumen and casts, and accordingly a diagnosis of morbus Brightii was made. Infus. digitalis was administered in ℥ss doses thrice daily, and under its influence he seemed to improve until the morning of June 4, when, upon making my rounds of the hospital about ten o'clock, he complained of sore throat, inability to swallow easily, and slight dyspnœa. His lungs were examined, and air was found to enter freely. There was nothing to be seen in his throat to give alarm, though there was some slight swelling and redness about the fauces and the mucous membrane of the pharynx. The epiglottis, likewise, was red and thickened to some extent. Having no evidence at this time to lead me to suspect the fatal termination which so soon followed, I prescribed a simple gargle of potassii chloras, tinct. ferri chlor., glycerin, and water, and left him, promising to return again within an hour and make a more thorough examination into his condition. I was about to return to him at the time stated, when a messenger met me with the information that my patient was dead. An autopsy made a few hours after death showed the mucous membrane of the epiglottis and the entire larynx to be very much swollen and œdematous. This œdema reached to such a high degree as almost to occlude the entrance into the larynx. In the pharynx and on the posterior part of the tongue the follicles were somewhat enlarged; both lungs slightly adherent to the pleura at various places, otherwise normal; heart somewhat enlarged: left ventricle relaxed and dilated to some extent, valves soft; liver of ordinary size, and pale; spleen normal; kidneys of ordinary size, their capsules slightly adherent in places; the parenchyma hyperæmic.

The case is an important one from the fact of its rapid fatal termination and as to its cause. The suddenness with which the trouble began and the rapidity of its progress must be referred to one of the several causes of œdema of the glottis; and as our patient gave evidence both clinically and pathologically of morbus Brightii, and as œdema of the glottis may occur as the first and only dropsical affection connected with disease of the kidney, as stated by Flint, it is more than probable that the patient's kidney-disease was the prime factor in bringing about the cause which so suddenly terminated his life.

At the New Orleans Exhibition, the McIntosh Galvanic and Faradic Company received the first medal for fine display of electrical goods, and also the first medal for their combined solar microscope and stereopticon.



WILSON'S CLINICAL CHART.

DR. JAMES C. WILSON has devised a combined temperature-sheet and clinical chart, by means of which the daily records of the progress of a patient can be made at the bedside, while the chart, at the time of completion of the case, can be filed away for future reference. The advantages of noting important clinical facts in the presence of the patient, in the direction of accuracy and completeness, are too obvious to need discussion; while the convenience to the busy practitioner of having the records kept with the minimum of writing can scarcely be overestimated.

The plan of the chart, the dimensions of which are eight and a half by eleven inches, can be readily seen by a glance at the illustration (which is reduced to about one-fourth of the size of the original). The back of the chart is blank, so that the previous history and state of the patient when first seen may be entered, as well as the final note as to his condition when discharged; while the important facts of the clinical record and details of treatment can be written in the appropriate place upon the chart from day to day.

These charts are put up in tablet-form of fifty by the J. B. Lippincott Publishing Company. They have already been introduced into several Philadelphia hospitals, and have also been employed in private practice, where their usefulness is even more evident than in the wards of the hospital.

NOTES OF HOSPITAL PRACTICE.

MARYLAND WOMAN'S HOSPITAL, BALTIMORE.

CASES UNDER THE CARE OF PROFESSOR A. F. ERICH, M.D.

UTERINE HEMORRHAGE.

CASE I.—M. B., 22 years old, had been married since her fifteenth year; had had one child, five years ago; no miscarriages. Menstruation has always been profuse, lasting from five to ten days. For three months she had been bleeding almost constantly from the womb. She complained of pains in lower part of abdomen and pelvic region. The patient is stout and apparently in good health. The cervix was dilated by means of a sponge tent, and the interior of the uterus examined with the finger. Nothing abnormal discovered. Ten grains of nitrate of silver were intro-

duced into the uterine cavity and allowed to remain. The patient was placed upon house tonic (tincture of iron and quinine). The bleeding did not return, and in twelve days she was discharged well.

Case II.—A. S., 22 years old, married in her seventeenth year. Had been a widow for eighteen months. She had had no children and no miscarriages, according to her statement. Had almost constant metrorrhagia. Uterus retroverted and slightly enlarged.

A sponge tent, followed on the following day by a tupelo tent, enlarged the cervix sufficiently to permit an examination of the interior of the uterus with the finger. The mucous membrane was found covered with small, soft, fungous elevations, which bled readily on being touched. The patient was anæsthetized, and the uterine cavity thoroughly scraped out with a dull curette. Afterwards the cavity was swabbed with strong nitric acid.

On the following day there was a sanguineous discharge from the uterus, which soon ceased.

The patient was discharged from the hospital eight days after the operation. There was no return of the bleeding.

Case III.—J. W., 34 years of age. Had had two children and one miscarriage, last pregnancy terminating two years ago. Menses were always pretty free, lasting six to seven days,—being, however, regular in recurrence until the last three months, during which time the flow had been pretty nearly constant.

The uterus was enlarged and anteflexed, the cavity measuring four inches from os to fundus.

The cervix was dilated by sponge and tupelo tents until a finger could be readily passed into the cavity, when a rough mass was detected which was diagnosticated as the remains of a partially-retained placenta, which had become organized and firmly united to the uterine wall. Under anæsthesia this mass was scraped off with a blunt curette. Just before the operation the patient's temperature was 104.2°, which ran up to 105.2°. Under antipyretic treatment this was soon reduced, and on the second day afterwards the patient was cheerful, free from pain, and the pulse and temperature normal. On the twenty-second day after the operation the patient left the hospital well, and has had no return of the bleeding.

Case IV.—A. G. H., 38 years of age. Has been married sixteen years; had eight children and five abortions. Her last pregnancy terminated sixteen months ago. Her menstrual periods were regular until four months ago, since which time she has had constant hemorrhages.

The cervix was dilated with a sponge tent, and the dilatation completed by means of the finger. A blunt curette was then introduced, and a mass of tissue scraped away, which seemed to be the remains of placenta. The patient recovered without a serious symptom, had no return of the hemorrhages, and was successfully operated upon four weeks later for ruptured perineum.

Case V.—L. B., 33 years old, of large build, and well nourished. Had been married five years; had had one child and three abortions. There is reason to suspect that the abortions were intentionally produced. Since her last pregnancy terminated (in a miscarriage), five months ago, she had frequent profuse hemorrhages.

The cervix was dilated with a tupelo tent and the interior of the uterus scraped out with the dull curette. A large mass of tissue resembling spleen-substance was removed, being probably portions of retained placenta. The operation was done under ether, from which she recovered with slight nausea. Six days after the operation she was sitting up, and a week later left the hospital, having had no return of the bleeding.

The above cases illustrate a mode of treatment very frequently resorted to in this hospital,—*i.e.*, curetting the interior of the uterus in order to check uterine hemorrhage. In many cases, especially where the hemorrhage is an accompaniment of fungous endometritis, the cavity is mopped out with liq. ferri subsulphatis or with fuming nitric acid, preference being generally given to the latter. The after-treatment of endometritic cases consists generally of applications of silver nitrate in solutions of gradually decreasing strength, beginning with one to eight, and good food and tonics: iron, quinine, and strychnine.

THERAPEUTIC BREVITIES.

Many of the patients applying for relief at the out-door department of the hospital complain of vesical irritability, frequency

of micturition, with burning pain at the meatus and much straining. In a large proportion of these cases the urine is alkaline and frequently cloudy. These symptoms are usually quickly relieved by the following combination:

℞ Acidi benzoici, ʒj;
Sodii biboratis, ʒjss;
Aquæ, fʒvj. M.

S.—Tablespoonful every three to four hours.

If the trouble does not yield to this medicine, Dover's powder in three-grain doses every two to three hours is frequently found effective.

As a tonic in the anæmic condition so often attendant upon the pelvic troubles of women, the following pill is given:

℞ Quininæ sulphat., gr. xlviij;
Ferri sulphat. exsic., gr. xxiv;
Strychninæ sulphat., gr. i. M.

Ft. pil. xxiv.

S.—One after each meal.

The operations for lacerated cervix are generally done in the hospital without an anæsthetic. A catgut loop is passed around the cervix and drawn tight by means of a wire-écraseur frame. This not only renders the operation a practically bloodless one, but the strangulation of the tissues obtunds the sensibility, and the denudation can be completed and needles passed without causing more than a slight degree of pain.

TRANSLATIONS.

Some Observations on Urticaria occurring in Infancy.*—Prof. Bouchard, in his researches upon dilatation of the stomach, has observed that a certain number of these patients are subject to more or less annoying outbreaks of urticaria. It is not at all surprising that a disease which has for its principal and immediate consequence faulty elaboration of the ingesta should awaken cutaneous manifestations like urticaria, when we see temporary digestive disorder (*embarras gastrique* and indigestion) accompanied by the same eruptions. This urticaria due to lesions or functional disorders of the stomach (like those which supervene after tapping hydatid cysts) is very probably a toxic urticaria due to the fact that the skin serves as a route of elimination to the poison elaborated in the digestive passages and taken up into the circulation. This, at least, is the rational explanation which M. Bouchard gave to this phenomenon in a paper recently read before the Faculty of Medicine.

Dr. Comby tried, in a certain measure, to apply to the infants coming under his observation the results which were obtained from adults by Prof. Bouchard. The dilatation of the stomach, encountered so often among the latter, Dr. Comby had found with almost equal frequency among infants of the poorer classes, subjected from birth to defective alimentation. Among animals, also, he had found, as a consequence of dilatation of the stomach, multiple disorders in many of the organs and tissues.

The diverse eruptions grouped by authors under the name of "*gourmes*" (porrigo, scald-head, etc.—Tr.) appear with extreme frequency in little patients with dilatation of the stomach; but, of all these eruptions, that which had struck him most by its objective and subjective characters is urticaria, of which he reports five cases. Two of these have been previously published in a memoir upon "Dilatation of the Stomach," the last three are new.

Case I. Boy of Three and a Half Years; Artificial Feeding; Rachitis; Chronic Urticaria; Dilatation of the Stomach.—A pale, thin child, sufficiently large for his age; nursed by his mother, but was not able to walk until fifteen months old; at the age of six months he took solid food; he often had attacks of vomiting, and had green and offensive-smelling stools. The abdomen had always been large; it presented along the linea alba the projection so often found in rachitis. It was easy to demonstrate the dilatation of the stomach; the churning or splashing extended to the level of the umbilicus. The infant drank a good deal. The mother brought the child on account of an extremely obstinate skin-eruption, extending over the entire body and reappearing at intervals since the age of six months,—that is to say, from the moment when the infant commenced to swallow other food besides the milk. These attacks of urticaria had been accompanied by much itching, which lasted several days, and which returned in

* Communication read before the Clinical Society of Paris by Dr. J. Comby. Translated from *La France Médicale* of August 25, 1885.

a severe form in spite of all the treatment employed. At certain times and seasons the eruption was more or less marked. Upon admission, his entire body was covered with urticarial wheals and lesions caused by scratching. It seemed perfectly legitimate to attribute this urticaria to the dilatation of the stomach, and it was hoped that treatment of the dilatation would act favorably upon the cutaneous manifestation. In fact, under the influence of dieting, and principally the suppression of the excess of liquid which the infant had been allowed to swallow, the chronic urticaria of three years' standing was completely cured.

Case II.—Girl of 19 months; improper feeding; chronic urticaria; dilatation of the stomach.

Case III.—Girl of 3 years; bottle-fed; rachitic; dilatation of the stomach; urticaria.

Case IV.—A child 25 months of age; bottle-fed; dilatation of the stomach; urticaria.

Case V.—A girl of 2 years; improper feeding; rachitis; dilatation of the stomach and urticaria.

[In these cases generally the symptoms resembled so closely those of the first case, and the results of treatment were so nearly identical, that they need not be given in detail.—Tr.]

The above cases belong to early childhood, from nineteen months to three years and a half. All of them, before the outbreak of urticaria, had presented grave and prolonged digestive troubles, which led naturally to dilatation of the stomach and rachitis. The first two were affected with the chronic form of urticaria, the most chronic and rebellious to treatment. The last three were cases of acute or subacute urticaria, coming within the class of what authors have described as "urticarial fever."

It is evident that the incessant and obstinate attacks of urticaria were in relation with the digestive disorders which the infants presented, and that the dilatation of the stomach was concerned in their causation. They were not the kind of urticaria which Bazin called pathogenetic, because this is provoked by the ingestion of certain articles, such as mussels, shellfish, lobsters, spoilt fish, etc. Besides, the little patients had not been subjected to an alimentation which could explain the urticaria; only the imperfect elaboration of food consequent upon dilatation of the stomach could be assigned as the cause. Treatment without attention to the disordered digestion will be unsuccessful for such cases; baths and topical agents will be used in vain; but, on the contrary, if we treat the dilatation of the stomach by dry regimen, the cure of the urticaria follows.

When attacks of urticaria occur in children, we should at once seek for disorder in the digestive tract, and in particular the stomach. Possibly dilatation of the stomach may also be found. For, among infants even more than among adults, the skin is reactive to the disturbances or functional disorders of the digestive tube. Under the influence of repeated attacks of indigestion, we see the bodies of young infants covered with eruptions, as if the cutaneous surface served as emunctories for the toxic matters elaborated in the digestive tract. These eruptions, weeping and covered with scales, will be replaced later by dry papules, by eczemas, or by attacks of urticaria. The cause of the cutaneous manifestations is always the same; the form alone is modified.

Dangers of Antithermic Remedies.—In a recent therapeutical conference, Dr. Dujardin-Beaumetz discusses resorcine, kairine, thalline, and antipyrine, and advises caution in their use, of the first three agents especially, from their active toxic effects. After referring to the eminently antiputrefying and antifermentive properties of resorcine, he states that he had used it in pyrexia without obvious effects, probably on account of the smallness of the dose. He finally abandoned it altogether in the treatment of rheumatism and typhoid fever, not so much on account of its want of power as because he observed toxic symptoms. Resorcine is not only an irritant, it is also a toxic agent; and in his experiments upon dogs it was determined that a dose of thirty centigrammes per kilo of weight of the animal produced convulsive phenomena, and death was caused when the proportionate dose was increased to ninety centigrammes. After death, visceral congestions were discovered, and especially very intense pulmonary engorgement, as in animals poisoned by carbolic acid. Man is even more susceptible to the effects of

resorcine than dogs. Munel reports a case in which a single dose of three and a half grammes (fifty-three grains) rapidly induced a condition of great gravity, which, however, was finally overcome.

Dr. Beaumetz says, "While recognizing resorcine as less toxic than phenic acid, I conclude that it is a dangerous antithermic agent, for I found in my typhoid patients treated with resorcine the same depression of forces, the same adynamia, the same pulmonary congestion, which I had found in those to whom I had administered phenic acid. I have therefore abandoned this medication, and I believe that, even in Germany, resorcine is not much employed internally, but it remains, on the contrary, a very valuable remedy for external use in the treatment of unhealthy wounds."

Kairine is an antithermic acting by diminishing the respiratory power of the blood and destroying hæmoglobin. The recent researches of Brouardel and Paul Loye confirm this view, and show that thalline and kairine exert the same destructive effect upon hæmoglobin. Moreover, contrary to the usual action of antithermic agents, kairine and thalline have no influence whatever upon fermentations. "Kairine should therefore be rejected from therapeutics; it is a dangerous drug, since it only produces antithermic effects by destroying the hæmoglobin and profoundly altering the blood, circumstances which should be avoided in the infectious febrile diseases."

Antipyrine is less toxic than either resorcine or carbolic acid. While it takes a gramme of resorcine per kilo to kill a rabbit, it takes 1.60 gramme per kilogramme of antipyrine. The toxic effect, moreover, is almost the same; it produces tetanic and paralytic symptoms analogous to those caused by strychnine-poisoning. It cannot be doubted, therefore, that antipyrine acts upon the cerebro-spinal axis, and it is probable that it lowers the temperature by modifying the nervous heat-centres. Contrary to kairine, antipyrine does not appear to change the liquor sanguinis, and particularly the hæmoglobin. It has also hæmostatic properties which Henoch declares superior to those of ergotine and of chloride of iron. (This is worth bearing in mind in treating hæmoptysis.) Antipyrine diminishes the urinary secretion, but increases the action of the glands of the skin, which renders it inconvenient to use it in cases of tuberculosis. Like the phenols and oxyphenols, antipyrine is an antiferment. The study of recent antithermics shows that the effects of these new agents vary with the nature of the fever: a temperature of 104° in a phthisical patient will be lowered by fifty centigrammes of antipyrine, while in a typhoid case it might be without effect. —*Bull. de Thérapeutique*, August 30.

Hypertrophic Rhinitis.—In his Thèse de Bordeaux (1885), Dr. Fontanilles discusses the treatment of rhinitis hypertrophica, which he defined as consisting in a swelling, general or local, of the nasal mucous membrane. The general causes are scrofula, syphilis, herpetism, chronic coryza, and acute coryza. The local causes are of special importance in the pathogeny. At their head he places an immoderate size of the openings of the nares, which admit large currents of air bearing irritating solid particles, which increase proportionately with the force of the current. The absence of hairs, the use of snuff, and the use of cold nasal injections too frequently, he names among the causes of hypertrophic rhinitis.

The functional symptoms are those of nasal stenosis. The progress of the disease is slow, and, according to certain authors, it is only an intermediate step towards atrophic coryza. It may be complicated with disturbances of olfaction, loss of smell, and difficult breathing. Hearing and sight may be affected, and there may be reflex disorders.

The diagnosis should be made between this condition and tumors of the nasal cavities, rhinoliths, foreign bodies, adenoid vegetations, and especially polypi.

The treatment is both constitutional and local; the first is directed to the diathesis, and the second consists in cauterizing the mucous membrane with galvano-cautery or chromic acid: he suggests that the preliminary application of cocaine may be useful.

From a study of several cases at the clinic of Dr. Moure, the author concludes as follows:

1. Hypertrophic rhinitis is not merely a symptom, but a morbid entity perfectly determined.

2. It must not be confounded with chronic coryza, naso-pharyngeal polypi, or adenoid vegetations.

3. The complications, sometimes serious, merit particular attention.

4. Its treatment, always successful, consists in the application of the galvanic cautery or crystallized chromic acid.—*Revue mensuelle de Laryngologie, d' Otologie et de Rhinologie*, No. 9.

Local Venous Circulation of the Fingers.—By following a new method of injection, in which the fluid is thrown into the veins towards the extremities, Bourceret has succeeded in demonstrating most beautifully the venous radicles and their relations to the capillaries and arterioles, in the hands and feet especially. Following the process of Bourceret (of placing the member in warm water, after a preliminary colorless injection into the main artery to distend the vessels), the large venous trunk is then opened and a canula inserted, then, in both vein and artery simultaneously, two injecting-fluids differently colored are forced until the smallest vessels are filled. The subsequent dissection reveals the delicate ramifications and final distribution of arteries and veins in a striking manner. The capillaries of the pulp of the finger display a remarkable arrangement. An arteriole of relatively large size may be seen to become suddenly broken up into a plexus of capillaries and form glomerules, which proceed to form venules. These glomeruli are seen principally upon the palmar aspect of the last phalanx, under the anterior two-thirds of the nail and on the thenar and hypothenar eminences.

At all these points, besides this special (tactile) circulation, could be seen the usual circulation of nutrition, of which the vessels presented the usual type. The veins of the fingers rise for the most part from the last phalanx. Then radicles unite almost immediately to form trunks of relatively large size. From thence they proceed longitudinally along the back of the finger, forming a subcutaneous vascular layer without forming irregular plexuses, but with frequent anastomoses.

In fact, there exists at the points named a special functional circulation, distinct from the circulation of nutrition, characterized essentially by the large calibre of the vessels out of proportion to the nutrition. According to M. Bourceret, this special circulation has for its object the giving of aid to the circulation of nutrition and of keeping the parts warm. It may also have something to do with the exquisite sensibility of these regions.—*Le Progrès Médical*, No. 35.

Pathology of Tetanus.—Dr. Arrigo Maroni ("Un Caso di Tetania," Milan, 1885, and *Le Progrès Médical*), having observed mydriasis and inertia of the pupils in a case of tetanus coincident with the access of spasm of the muscular system, and occurring independently of any alteration of the tissues of the eye, as well as from certain physiological reasons, has been led to entertain new views with regard to the pathology of tetanus. Without going into the details of this interesting communication, the conclusions are as follows:

1. The site (and the central organ) of the neurosis in question is found in the gray substance of the spinal cord, and more particularly in the cilio-spinal zone, without excluding, however, the medulla oblongata.

2. A periodical morbid stimulus developing itself in this gray matter, and exalting the physiological activity of different groups of cells therein contained, will provoke, by predominant excitation of the motor groups, paroxysmic muscular contractures; by excitation of the sympathetic centres, spasmodic mydriasis; and, affecting to a certain point the sensory tract, it will provoke divers disorders of sensibility, local or general, preceding or accompanying the access.

3. The cause of the morbid stimulus probably resides in the variation of blood-pressure within the spinal cord due to a reflex action upon the vaso-motor nerves in consequence of an irritation affecting the peripheral branches of the sympathetic or of the sensory nerves.—*Le Progrès Médical*, No. 32.

Erysipelas.—In a communication read before the Académie de Médecine, MM. Trélat and Verneuil insist upon the importance of antiseptic treatment, and urge the isolation of cases occurring in hospitals. M. Cornil said that the difference in gravity between medical and surgical erysipelas is due to the fact that in the former the bacterium of erysipelas exists alone, while in the latter it is combined with the micro-organisms of pyæmia, and that in the latter class of cases it occurs in patients already weakened by previous sickness or traumatism.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 3, 1885.

EDITORIAL.

THE NEW VOLUME.

THE *Philadelphia Medical Times* enters upon its sixteenth year of publication with a larger number of subscribers and readers than at any previous time in its history, thus demonstrating very satisfactorily that its course meets the approval of the profession.

During the current year it is the intention to continue the special features which have hitherto given value and interest to its pages. Original communications, reports of rare and interesting cases, notes of successful treatment, and especially hygienic and sanitary reports, will always receive early attention, and if possessing general interest will be published as early as possible. Authors of papers written for this journal will receive reprints of their articles, if desired, or an equivalent in money at the time of publication; and we invite our readers to communicate such facts or observations as they think interesting and useful, and capable of contributing to the progress of our art.

In deference to the suggestion embodied in several communications, it has been decided to retain the title of *Philadelphia Medical Times*, chiefly in order to prevent confusion with journals of the same name in other cities, and to retain credit for abstracts taken from our pages, although in view of the scientific and non-sectional standing of the *Times* it would be preferable to drop the portion of its title which might be construed as implying that its interests are local or limited.

The thanks of the editor are heartily tendered to the contributors, correspondents, and collaborators who have so faithfully performed their work in the volume just completed, as well as to those who have promised to continue their valuable assistance for the coming year.

RECENT EXPERIMENTS REGARDING THE EFFECTS OF TEMPERATURE UPON THE FILTRATION OF ALBUMEN.

THE physical conditions controlling the rapidity of filtration and affecting the relative quantity and character of solutions of albumen passing through animal membranes have been recently investigated by several observers. Although the question is still too recent to warrant drawing formal and final conclusions, yet results have been obtained of considerable interest in their relation to physiological and pathological problems now engaging professional attention.

Dr. Adolph Loewy* has reported the results of a number of experiments instituted with the special object of determining the influence of temperature upon the filtration of albuminous solutions through animal membranes. The results obtained by him have special significance in their bearing upon the appearance of transitory albuminuria during pyrexial states, and the occurrence of exudations and serous effusions. W. Schmidt had previously published (in *Poggendorf's Annalen*, Bd. 99, p. 350) the reports of a series of experiments upon the quantity and character of the filtrate as affected by pressure, concentration, combination, and temperature of the original solution. Although aqueous solutions of salts were employed, as a rule, he subsequently reported a few observations upon filtration of gummy and albuminous solutions also (*idem*, Bd. 114). Runeberg has more recently communicated the results of

* Ueber den Einfluss der Temperatur auf die Filtration von Eiweisslösungen durch thierische Membranen.—*Zeitschrift für Physiologische Chemie*, vol. ix. Heft 6, Strassburg, 1885. A bibliography of the brief literature of the subject is appended to Dr. Loewy's paper.

experiments instituted to determine the influence of different conditions upon the rate of filtration. The temperature, however, has been a factor which hitherto has not had the attention given to it which its intrinsic importance deserved. Some observers had only noted it in an endeavor to secure a uniform condition for their experiment, others appeared to have overlooked it entirely. At the suggestion of Prof. Senator, Dr. Loewy undertook to investigate this point, and, by making use of an ingenious filtering apparatus designed for the purpose by Dr. Herter, was able to get results which to a certain extent contravene those of Schmidt and Runeberg, whose methods are criticised in the communication referred to, and a course of experiments detailed, the conclusions deduced being as follows:

1. The quantity of the filtrate increased with the temperature. The higher the degree of temperature, the more the filtrate.

2. The residue (after heating the filtrate to dryness in a water-bath), in its *absolute* quantity, was also increased by the high temperature; and here also the rule is, the greater the temperature the more the increase.

In the greater number of cases, the *relative* quantity in high temperature was also proportionately large.

3. The absolute amount of the organic constituents of the filtrate shows a greater or less increase, corresponding with a greater or less degree of temperature. The percentage or *relative* value is, in high temperature, likewise increased in the greater number of cases.

4. The inorganic constituents, as the temperature is raised, appear in greater quantity in the filtrate. However, the increase of temperature had less influence upon them than upon the organic, since their relative quantity was reduced in the greater number of cases.

These experiments may possibly throw some light upon the difference in the relative proportion of albumen existing in transudations and exudations,—the greater amount of albumen in the latter during the fever-process being connected with the more easy filtration of the albumen in higher temperature. Although under normal conditions the urine is almost entirely free from albumen when first secreted, yet there are numerous pathological conditions attended by an increase of albuminuria. In explanation of those in which fever occurs these experiments find direct application, although other factors doubtless enter into the pathological problem besides the merely physical ones of heat and pressure.

COMPULSORY VACCINATION IN CANADA.

IT is with apprehension and regret that we receive the intelligence of the riots in progress in Montreal against the enforcement of the Compulsory Vaccination Act, which went into operation September 28: apprehension, because the existence of an epidemic of smallpox on our border makes us deeply concerned in the efficiency and promptness of the methods used to control it; and regret, because it is a serious matter for a community to require to be forced to do that which its physicians believe to be necessary for the public health. While it is universally admitted that a man in becoming a member of a community is obliged to submit to some restrictions, it is by no means uniformly settled by law or custom just how much of his personal liberty he thereby does surrender. It is hoped that the time will eventually arrive when all men will do what they ought to do of their own volition, but until the dawn of the millennium the problem of enforcing right by might will continue to puzzle the physician, the moralist, and the statesman. It is expedient and necessary that all should submit in the emergency of an epidemic to extraordinary measures for the preservation

of public health, and vaccination affords protection from smallpox at such slight sacrifice of physical comfort that every one when required should, by personal example and influence, endeavor to have it universally performed.

In the presence of an epidemic the municipal and State authorities might at once order the vaccination of all the attendants and inmates of State institutions, hospitals, asylums, and prisons; of children in the public schools; of all immigrants, as well as vagrants or criminals arrested upon the streets, and also all who apply for the operation. Houses in which smallpox prevails should be isolated, and no one allowed to go in or come out without complying with the requirements of the Health Board. But when we come to the compulsory vaccination of healthy families in the absence of disease in the household, the terms of the problem are slightly altered, and this question is one that should engage the serious and careful consideration of both legislator and physician. The medical profession, in this case, is a friend both of the court and of the claimant, and in this position can do much towards creating a healthy public sentiment upon sanitary measures, and thus aiding the enforcement of measures required for the public health. In a free country ignorance is better taught, than fought.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

I HAD hoped to be able to give some account of the discussion on glycosuria at Cardiff in this letter, but have been disappointed by the non-publication of the details: it must, therefore, stand over till a future letter.

The next most important medical matter of the present time is Dr. Goodhart's Bradshawe Lecture at the Royal College of Physicians, on "Morbid Arterial Tension." This should have been delivered by the late Dr. Mahomed, whose work in connection with the subject is so well and so widely known. Some account of him and his labors was given in a recent letter.

Dr. Goodhart, who is Senior Assistant Physician and Lecturer on Pathology at Guy's Hospital, commenced with a fitting tribute to the departed man in whose stead he stood. After this he plunged into the subject, with which he manifested great familiarity. He commenced with the late Dr. Bright; but it is known that, long anterior to his day, Dr. James, of Exeter, had observed that there was a tight pulse without hypertrophied left ventricle—without any valvular disease—in certain cases; and this he attributed to some impurity in the blood which impeded its outflow through the small vessels. Dr. Bright found coexistent kidney-disease, and regarded the impurity in the blood as nitrogenized waste,—a view now generally entertained. He put it: "Either the altered quality of the blood affords irregular and unwonted stimulus to the organs immediately, or it so affects the minute and capillary circulation as to render greater action necessary to force the blood through distant subdivisions of the vascular system." The subject has been worked out at length by Prof. George Johnson, of King's College, who has written so well on disease of the kidneys. He expounded a stop-cock theory of arteriole contraction, cutting off the supply of impure blood to the tissues.

While this exposition has undoubtedly attracted much attention to the subject, I cannot help feeling that this fanciful explanation has stood in the way of its acceptance by many. Dr. Goodhart holds the balance just and true when he says, "Fully examined, there is not much objection to that way of stating the case; but there is just a touch of fancy in the stop-cock simile, which provokes the criticism that it smacks too much of a purposive volition." He then gave what Dr. Dickinson has said of this view: "The heart and arteries are thus represented as acting in antagonism and hypertrophied by the efforts each makes to get the better of the other."

Dr. Goodhart thinks this not unphysiological, and that Dr. Bright did well to stick to the clinical facts. He pointed out that where resistance is to be overcome, organic muscular fibre develops to meet the occasion, as seen in the intestine when there is a stricture, in the walls of the bladder when it experiences a difficulty in emptying itself; and the same occurs with the heart. "In all these instances we see simple illustrations of a common physiological principle admitted by all." The question, he said, is, "Is the muscular coat of the arterioles thickened in chronic renal disease?" To this he replies, "Not so much by a demonstration of the fact, which is perhaps not so easy as it might at first sight appear; but by an appeal to the entirely *a priori* ground that it must be so." Dr. Johnson always argued that there must be resistance

offered at the arteriole end in order to set up high arterial tension and an hypertrophied left ventricle. He showed the hypertrophied muscular fibre under the microscope previous to as well as in that notable conflict between himself on the one part and Sir William Gull and Dr. Sutton on the other part, before the Medico-Chirurgical Society in 1870.

Dr. Goodhart holds that "appeal to demonstration, and to demonstration only, in the present day is too absolute. No doubt it is, on the whole, the safest ground to tread, but appearances admit often of various interpretations;" while, within such limits as its present use, he believes his argument to be unassailable.

As regards the existence or non-existence of spasm in the arteriole-wall, he raises the question whether the muscular walls of the arterioles do not really help to propel the blood by a vermicular action. If such is the case, then arterio-capillary fibrosis or degeneration of this muscular coat would lead to arrested blood-flow, and so we get an hypertrophied left ventricle, with degenerate walls in the arterioles. This view has been upheld by several men who have worked at the subject. He said, "In withstanding the increased blood-pressure it surely must count for something, if it be but the pygmy to the giant." There can be no question about the clinical fact that there is a linked condition of a tight artery, an hypertrophied left ventricle, an accentuated aortic second sound, and a large flow of urine, the physiological associate of high arterial tension.

He then adduced the analogy of the action of digitalis, which "is said to increase the strength of action of the muscular wall of the heart on the one hand, of the arteries on the other." If Rosenstein is right,—and few will call his statement in question,—"digitalis empties the veins and fills the arteries." Consequently it increases arterial tension. About its direct effect upon the heart, no one who has watched a dilated heart contract under its persistent use until a distinct amount of hypertrophy of the left ventricle is induced can doubt that part of the argument. That it also prevents the rapid outflow of blood from the arterial system is a matter few will call in question who have had much experience of its use. In one of the few cases where its toxic effects were brought out in my experience, the pulse was hard and the action of the heart violent and hammering; indeed, a condition was set up precisely analogous to that of the high arterial tension of Bright's disease.

As to the question of spasm, Dr. Goodhart says, "It is clear that a muscular action which leads to hypertrophy might easily pass into spasm under conditions similar to but in excess of those which have provoked the increased action." We see in angina pectoris vaso-motoria, common with the gouty heart, an instance of a condition of passing spasm implanted upon one of hypertrophy of the two muscular ends of the vascular system. He continues: "Indeed, the assumption of some such spasm, if not necessary, is at any rate agreeable to many of the phenomena of Bright's disease. I may instance the headache and the renal asthma, both of which are sometimes much relieved by nitrite of amyl and nitro-glycerin, drugs which unquestionably relax spasm and promote dilatation of the peripheral vessels."

Having thus discussed Dr. Johnson's views, which find remarkable support in the evidence furnished by the sphygmograph, he turned to the arterio-capillary fibrosis of Gull and Sutton. It is not generally known that Dr. Handfield Jones wrote on this subject considerably anterior to these two later investigators. Their position, according to Dr. Goodhart, is this: "Old age is not an entity, but a set of conditions predisposing to that state which is called chronic Bright's disease." He continues: "And while to most this comes in natural order when the prime of life is over, yet to some old age is no matter of years and averages, but the running down of a spring set for an individual. It comes at times even to children. In the tints of summer—yes, even in those of spring—you can read old age if you will. And although chronic Bright's disease is in many cases associated with renal disorder, it is not essentially a matter of organs; the generalizing change in the tissues of the whole body is the essential, and to some this comes not by kidney chiefly, but by lung chiefly, by brain, by heart, and so on." It is with the greatest possible pleasure I write what Dr. Goodhart has put at once so happily and so pithily.

As long as Bright's disease is a matter of the presence of albumen in the urine, so long will the medical man's mind be like a closed fist, which, as Rufus Lyon justly said, "is shut up from receiving and holding aught precious, though it were heaven-sent manna" ("Felix Holt"). So long as a deceptive error is firmly planted across the path to knowledge, no progress can be made except by those resolute enough to cross the barrier somehow. For the man who emancipates himself from the demoralizing superstition, a broad expanse of knowledge spreads itself out before him; and such good, honest teaching as this of Dr. Goodhart's ought to do much to encourage men to get to the farther side of the barrier, and see in what we call "Bright's disease" something larger, something more extensive and wide-spread, than kidney-mischief solely,—and that is not mere albuminuria. Of course the simplicity of boiling urine in a test-tube recommends itself to many minds as much easier than a thorough acquaintance with a wide-spread and complicated morbid process in its complexity as well as with each individ-

ual detail. He cleverly describes this change as "a magnificent scheme of decay," and says of it, "The idea is a suggestive one, and it is largely true. Pathology is distinctly the richer for it, but it derives its strength less from the labors of the histologist than from the bird's-eye view, the intuition—may I call it so?—of experience. There is ground in plenty for the argument that we wear out by tissues or systems; there is, I think, a fair amount of evidence admitting the opinion that chronic Bright's disease, with contracted kidney, is a generalized degeneration; but to base it upon the non-existence or unimportance of muscular hypertrophy of the arterioles, and to ascribe the thickening which exists to an essentially hyaline fibroid degeneration, is equivalent to the unskilful selection of a battle-field." Then he proceds: "How far, then, do I think it is true? Perhaps an answer to that question may best be arrived at by continuing upon the other, How far is it not true? And, going to the other end of the circuit, there are groups of cases which admit no doubt in which the disease in the kidney is certainly the cause of the changes in the heart and arteries." He has collected a number of cases where parenchymatous nephritis was the morbid starting-point, and changes in heart and arterioles followed therefrom. As to how quickly perceptible hypertrophy of the heart can be developed, the change is often more rapid than is assumed. (I remember Prof. Traube, of Berlin, discussing this question in La Charité, Berlin, and giving it as his opinion that perceptible changes may be set up in a few weeks,—five, in one case.)

Dr. Goodhart says, "A large series of observations may possibly throw some light upon the moot point, the rate at which the heart can put on muscle; for the heart has been found large in some cases in which there was every probability of the renal disease having existed but a few weeks." He then discourses of a very practical matter: "Such differences as do exist between the two classes of cases are of more practical moment than of worth as distinctions. For, in the first place, it may be said that the failure of health and of nutrition will not unfrequently combine so to reduce the arterial tension as to deprive the circulatory system of the excuse for hypertrophy. The danger, too, in these cases is much more serious at any one time than the granular kidney can show. The left ventricle has, in consequence, more tendency to dilate, and thus to relieve the excessive tension and forestall the hypertrophy by the death of the patient. I put it thus pointedly as a fact of importance. In proportion as the renal disease is sudden and severe, so is the risk of dilatation of the heart. The more insidious it is, the more likely is the cardiac hypertrophy to be present in greatest perfection. Serious acute renal disease means sudden increase of arterial tension and the imposition of greatly-increased labor of the heart, and rapid dilatation of the wall becomes a serious risk." Bravo, Dr. Goodhart! Concentric hypertrophy of the left ventricle is not the only cardial change, though some seem to think it is.

I have long insisted that the cardiac change will be a blend of hypertrophy and dilatation, according to the rapidity of the demand upon the heart and the nutritive powers of the system. In "Gout in its Protean Aspects," page 49, is written, "When the nutrition of the tissues is defective, then, instead of hypertrophy, dilatation is the consequence of a high blood-pressure in the arterial system." There is another misleading superstition scotched, if not slain. In a recent letter I gave some details of a case where a heart fairly hypertrophied yielded after two severe attacks of angina pectoris vaso-motoria, and a condition of dilatation was set up in a very short time. In speaking of the relation of this condition of high arterial tension to atrophy, Dr. Goodhart says, "It is obvious that dilatation of the heart is unfavorable to the occurrence of apoplexy. It relaxes the tension at the centre which would otherwise be put on at the periphery, and death comes about by cardiac failure, and not by peripheral hemorrhage." Then, in looking at the matter from a clinical stand-point, he continues: "It is worth remembering, for it cannot be unimportant whether the risks of an individual are those of apoplexy or of the more gradual process of cardiac failure; and the undoubted value of a drug such as digitalis in many of these cases is a ready criterion of the importance of the point in the matter of treatment." Right again, Dr. Goodhart. In the one case you materially increase the danger of the large heart bursting an artery, in the other you strengthen a failing heart.

Then the lecturer proceeded to discuss the hyaline fibroid changes found with the large left ventricle. The gist of what he said, and said well and convincingly, is as follows: Where a tendency to tissue-growth is set up in a complex tissue like an arteriole-wall, "the least specialized or less dainty feeders are likely to have the best of it and to supplant the more highly specialized. . . . Therefore I see no contradiction in the fact that in the tissues and vessels of chronic renal disease the muscle may be thick in some parts, wasted in others, or that the vessels can be recognized as well by the hyaline fibroid thickening of the coats as by the muscle." When we remember that overstrain or high arterial tension is the exciting cause of atheroma, it is not difficult to conceive of change in other tissues than the muscular. "Hence, as the direct outcome of the overwork, we might expect more or less excessive nucleation of the coats of the arterioles, and ultimate fibrosis." This point is insisted upon by Dr. Dickinson.

As to the production of cardio-vascular changes in renal disease, he said, "It is only in cases where the excretory area is disproportionately small for the body-weight that the effect must be sought. If the body waste and the heart fail, the kidney may be small indeed, yet sufficient for its day,—just as the chronic phthisic could not possibly have lived on had not the progressive wasting compensated the balance. It is also true that the general changes may be extreme, and the kidneys but a little granular or coarse."

What Dr. Goodhart has to say upon albuminuria as connected with Bright's disease is short, and to many no doubt eminently unsatisfactory. Indeed, it is difficult to discern what is his real attitude upon the matter. It is instructive, in the present state of medical feeling on the subject, that he devotes so little space to the subject, and what little is said is put cautiously. "I suppose that ever since Bright's time it has been felt by all that albuminuria must often be but a rough and a late test of disease, and that there are conditions preceding it which, if we could recognize them, would tell us more."

Then he went into the subject of the sphygmograph and its revelations. It "told us, in one sense, what we knew before, but it told its tale with a graphic interest which had much the merit of a new discovery." What it tells is of increased arterial tension, and supports "the hypothesis advanced and supported by Dr. Walshe as early as 1849, that Bright's disease is not renal, but primarily a blood-disease." He next pointed out the frequency of dilatation of the pulmonary artery in cases of prolonged high arterial tension. In conclusion, it may be said of Dr. Goodhart's lecture that it was in every way worthy of the occasion, and a demonstration that the school of which Bright and Addison were but recent factors, despite dark days, is still vital and active, and holding its place in the van of medical progress. No doubt the lecture will soon appear in pamphlet-form, in which many will be glad to renew their acquaintance with it.

J. MILNER FOTHERGILL.

BALTIMORE.

BALTIMORE, September 14, 1885.

FOR the past seven years the Medical and Chirurgical Faculty of Maryland has had its meeting-rooms and library in a building part of which was used as a patent-medicine factory. Members on going to the rooms would see directly in the entrance-way a sign one could not help noticing, setting forth in large and conspicuous letters the virtues of "New Life," an unfailing cure for consumption and all lung-diseases. This has been a source of much complaint among the members; but it is only recently that steps have been taken to remove the library to more commodious and respectable quarters in the Athenæum Building, corner of St. Paul and Saratoga Streets. The new rooms were formerly occupied by the Mercantile Library. In the same building are the valuable library and art collection of the Maryland Historical Society. The library of the Faculty is constantly increasing in size and value, and the large number of current journals upon the tables makes it one of the best working medical libraries in the country. Unfortunately, the Faculty has no permanent home, but is at the mercy of landlords. Some years ago a beginning was made to raise a fund for a medical building, but only a small sum was collected, and the enthusiasm of a few who started it seems to have entirely fizzled out.

The preliminary lectures of the winter session begin to-day at the medical colleges here. The prospects for large classes are favorable.

The Baltimore Medical College, one of the younger institutions, has put on a spurt. A hospital was secured last winter, and a handsome new college-building has just been completed. The majority of the members of the present faculty are young and energetic, and promise to deserve success.

Owing to impaired health, Prof. Richard McSherry will be unable to deliver his course of lectures on the Principles and Practice of Medicine in the University of Maryland this winter. His place will be filled by Prof. Chew, and the course on Materia Medica and Therapeutics will be given by Prof. I. E. Atkinson.

It is rumored that Prof. Matthew Hay, of Edinburgh, has been elected Professor of Pharmacology in the Johns Hopkins University. By this appointment five of the chairs in the future medical department of this university have been filled. These are Physiology, Chemistry, Pathology, Hygiene, and Pharmacology. The incumbents of the four first-named are, in order: Dr. H. Newell Martin, University Professor of Biology; Dr. Ira Remsen, University Professor of Chemistry; Dr. William H. Welch, formerly Pathologist to Bellevue Hospital, New York; and Dr. John S. Billings, U.S.A., who will lecture on public hygiene.

Dr. George M. Sternberg, U.S.A., has been ordered by the State Department to return to Rome as the delegate from this country to the International Sanitary Conference, which reconvenes in November. Dr. Sternberg has just been elected an honorary member of the Royal Academy of Medicine in Rome.

G. H. R.

AGARICINE, in doses of one-sixth of a grain, to be repeated if necessary, is an efficient remedy for excessive perspiration, and there appear to be no disagreeable or undesirable effects attendant upon its use.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN GYNÆCOLOGICAL SOCIETY.

THE Tenth Annual Session was held in Columbian University, Washington, D.C., September 22, 23, and 24, 1885.

TUESDAY, FIRST DAY—MORNING SESSION.

The meeting was called to order by the President, Dr. William T. Howard, of Baltimore.

Dr. Samuel C. Busey delivered the address of welcome to the Association as the guests of the Washington Obstetrical and Gynæcological Society.

The first paper, by Dr. Samuel C. Busey, of Washington, was entitled

THE NATURAL HYGIENE OF THE CHILD-BEARING LIFE.

Although pregnancy is to be regarded as a physiological process, yet Dr. Busey regards it as one which terminates with more or less injury to both mother and child; it is impossible to define the border-line of health and to say where the physiological ends and the pathological begins. The age of greatest safety coincides with the age of greatest fecundity; beyond and below this period the mortality increases with the difference in age. The fifth quinquiniad is the period during which the laws of fecundity, nubility, and survival find their natural complement in relatively the highest perfection. Precocious maternity is to be deprecated, but in this country and in the higher walks of life precocious matrimony seems on the increase. To this evil he desired to direct general attention.

The discussion was participated in by Drs. Chadwick and Reynolds.

Dr. Henry J. Garrigues, of New York, read a paper on

PUERPERAL DIPHTHERIA.

The speaker had met with twenty-nine cases of this affection. It is one of the different diseases included under the term puerperal fever, and is characterized by diphtheritic infiltration somewhere in the genital canal of the puerperal woman. The situations in which the vagina narrows, and the posterior wall of the vagina, are the parts most commonly affected. Five of the twenty-nine cases died, and in all of these the autopsy showed the uterus much larger than it should be. Its walls were thickened and softened, sometimes almost diffluent. In some cases the muscular tissue has been scooped out, as is seen in dissecting metritis. Anything that weakens the patient, as well as injuries to the genital tract, predisposes to the affection. The cause of the disease is, however, infection from the outside, and this infection appears to be carried from one patient to another by the air of the ward.

The first symptom is usually the occurrence of fever two or three days after delivery. There are at times chills or chilly feelings. The temperature, as a rule, varies three or four degrees from the normal. Examination shows the uterus larger than it should be, and quite tender. The lochial discharge is often scanty. The diphtheritic patch makes its appearance from three to seven days after delivery.

The diagnosis is not difficult. The affection is to be distinguished from the grayish discoloration of abraded surfaces following the use of corrosive sublimate, and the sloughs produced by the application of chloride of zinc in the treatment of this disease.

The prognosis is doubtful. Five out of twenty-nine cases died, giving a mortality of 17.2 per cent. When the diphtheritic process is checked, recovery is usually rapid. The duration of the disease, when it ends in recovery, averages two weeks.

To prevent the development of the disease, the vaginal examinations during labor should be as few as possible. Neither the finger nor the hand should be introduced into the uterus unless it is absolutely necessary. Wounds of the genital organs should be avoided, and instruments should be used with care. The most important element is, however, antisepsis with bichloride of mercury. Everything that comes in contact with the genital organs should be disinfected with a one- to two-thousandth solution of corrosive sublimate. Since he had adopted this method, the speaker had seen but one case, and that was where a resident physician had delivered a woman immediately after removing a macerated fœtus from another patient.

The plan of treatment which had given the most satisfaction had been applications of a solution of equal parts of chloride of zinc and distilled water, applied to the diphtheritic patches; and, as the application is painful, an anæsthetic may be used. Where the uterus is involved, warm intra-uterine injections of corrosive sublimate solution (1 to 2000) are employed; and, following this, a suppository of fifteen grains of iodoform is introduced. The intra-uterine injection needs to be repeated only once in the twenty-four hours, but the vagina should be douched with the same solution every three hours. If after twenty-four hours the diphtheritic process is not arrested, the application of chloride of zinc is to be repeated. If the disease be limited to the vagina and vulva, the intra-uterine treatment is to be omitted. Such remedies as are indicated by the general symptoms are given internally.

The speaker then exhibited the occlusion-bandage which he uses after labor. This consists of a pad of absorbent cotton, to be placed against the vulva; over this he places a piece of waxed muslin or rubber-cloth, and

outside a pad of cotton. The whole dressing is treated with the bichloride of mercury solution and secured to the binder by means of a strip of muslin or cotton flannel. The doctor then referred to the great decrease in mortality following the introduction of this treatment. Previous to its adoption, the death-rate had been nearly seven per cent. It was now less than three-fourths of one per cent.

Dr. W. T. Lusk, of New York, and Dr. W. L. Richardson, of Boston, had used the method of Dr. Garrigues with success.

Dr. John Byrne, of Brooklyn, described an interesting case in which vaginal deformity by cicatricial tissue followed puerperal diphtheria.

FOUR CASES OF OÖPHORECTOMY, WITH REMARKS.

This was the title of a paper by Dr. Joseph Taber Johnson, of Washington.

The first case was that of a woman, aged 29, who for fourteen years had suffered with chronic oöphoritis and menstrual epilepsy. After the failure of all other treatment, both ovaries and one Fallopian tube were removed. The patient made a good recovery, and for several months had no periods and no spasms. Gradually the menses returned, and with them the spasms to a slight degree.

The second case was that of an unmarried woman, aged 21. For five years she had chronic inflammation of the ovaries following suppression of the menses from cold. The ovaries and tubes were removed, and the patient is now well.

The third case had been a great sufferer with dysmenorrhœa and reflex symptoms. After four months' treatment, oöphorectomy was performed, and the patient recovered and continues well.

The fourth case was a married woman, aged 40, the mother of several children. She had complained of a pain in the left ovary for twenty years. She was practically bedridden for three weeks out of every four. She insisted on an operation, although she was advised to postpone it for a few years longer until the occurrence of the menopause. The ovaries and tubes were removed. She did well for three days, but vomiting then appeared, and she died on the sixth day.

DISCUSSION.

Dr. R. S. Sutton, of Pittsburg, advocated the performance of an exploratory operation in these cases where the seat of the disorder appears to be the ovaries or tubes, even when the disease of these organs cannot be demonstrated.

Dr. W. H. Baker, of Boston, thought that there was danger of this operation being performed too often. An operation which gives such brilliant results in properly-selected cases, is apt to be abused. If in an exploratory operation the ovaries and tubes are found to be healthy, so far as their gross appearances are concerned, they should not be disturbed.

Dr. T. A. Emmet protested against the too frequent performance of the operation. There are some cases in which it is indicated, but these are rare. He thought that it should never be done for dysmenorrhœa, which he considers a neuralgic condition dependent upon anæmia. Where dysmenorrhœa is relieved by the operation he believed it to be attributable to improvement in general nutrition rather than to the mere removal of the ovaries.

The paper was further discussed by Drs. Lusk, Reamy, Jenks, and Mann.

WEDNESDAY—SECOND DAY.

The first paper, the President's address, on

TWO RARE CASES IN ABDOMINAL SURGERY,

was read by Dr. William T. Howard, of Baltimore.

The first case was as follows. A negress, aged 24, married, presented herself at the Dispensary of the University of Maryland, April 26, 1882. She was the mother of five children, and had never had a miscarriage. Menstruation was normal and regular. The last child was two months old. Shortly after this confinement she observed an enlargement in the lower part of the abdomen. Examination showed well-marked fluctuation all over the abdomen, with distinct resonance around the umbilicus, with dulness and bulging in both flanks. Six weeks later the umbilical resonance had disappeared. Two weeks later she was seen by Dr. Howard for the first time. She was then evidently quite sick, with a temperature of 102°. Physical examination revealed the presence of pleurisy. Crackling râles were found throughout the lungs. The abdomen was of about the size of seven months' pregnancy, and remarkably protruding in the centre. There was complete dulness over the tumor, and resonance in the flanks. The area of dulness was unchanged by variation of position. All the signs of a unilocular cyst were perfect. The uterus was found well in front of the cyst, and the sound entered two and two-thirds inches.

The next question was as to diagnosis. Ovarian cyst was excluded by the infrequency of this affection in the negro and by the rapid development of the tumor. Fibro-cystic tumor of the uterus was excluded by the great rarity of the disease and its extreme rarity before the age of thirty-five years, the rapid growth in the present case, and the absence of menstrual disturbance. Parovarian cysts are usually of slow development, are apt to be flaccid, are comparatively rare, and do not affect the general health. This was therefore excluded. Simple ascites was excluded with-

out difficulty. Encysted dropsy of the peritoneum was next considered. This, in the early stages, is accompanied with symptoms of constitutional disturbance. The abdomen is not prominent, and often flaccid. This was therefore excluded.

On June 20 the speaker aspirated the abdominal cyst, and removed a light, straw-colored fluid which speedily coagulated. The patient did well for three days, when acute peritonitis appeared, and she died on the seventh day.

At the autopsy a large mass, consisting of the omentum, the transverse colon, and small intestine, bound together by inflammatory exudation, was found. This formed a cavity in which the fluid had collected. The peritoneum was everywhere invaded with miliary tubercles. There was tubercular ulceration in the small intestine. The other abdominal organs were not affected. There was also tubercular pleurisy, and throughout both lungs were scattered gray miliary tubercles. This was then a case of encysted tubercular peritonitis, presenting the character of an ovarian or a parovarian cyst.

Case II.—F. R., aged 24, complained of a heavy weight in the abdomen, which was greatly enlarged. There appeared to be an immense unilocular cyst. This had begun seven years previously, and the increase in size had been gradual and not accompanied with pain. The length of time which it had lasted was against its ovarian origin. The length of time that it had been developing, the marked fluctuation and the flaccidity of the cyst, were in favor of a parovarian cyst; but the fact that the tumor could not be impressed below the umbilicus was against this view. Fibro-cyst of the uterus and encysted peritonitis were excluded. The diagnosis lay between an ovarian and a parovarian cyst.

An exploratory operation was decided upon. The peritoneum was much thickened, and closely adherent to the cyst. A trocar was introduced, and forty pints of fluid escaped. It was impossible to enucleate the sac. The opening in its wall was therefore enlarged, and on looking into its interior it seemed as though all the abdominal organs had been removed, the cyst-wall being stretched tightly across the spinal colum. A drainage-tube was introduced, and the wound closed. The patient died of acute peritonitis. A satisfactory post-mortem was not obtained, so that no further light was thrown on the nature of the case.

DISCUSSION.

Dr. Emmet said that while in the case described yesterday he objected to exploratory operations, yet in these cases of tumor he advocated it, for the woman had something that should be taken away. He had seen a case resembling the second one described in the paper. He was obliged to leave the sac. This was washed out frequently, and in six weeks had greatly diminished in size. Strangulation of the intestine then occurred, and the woman died.

Dr. William Goodell thought that in many of these cases it was very difficult to make the diagnosis even after the removal of the tumor. He favored exploratory incision.

Dr. T. A. Reamy had seen a case of encysted tubercular peritonitis in which the patient died on the second day after the removal of the fluid. He also described cases showing the difficulty of diagnosis.

Dr. W. T. Howard, in closing the discussion, said that in the majority of cases a diagnosis could be made. The cases that he had described were instances of rare affections. They had been cited to facilitate the diagnosis of similar cases.

Dr. T. A. Reamy, of Cincinnati, read a paper on

THE CARE OF THE PERINEUM DURING LABOR.

After referring to the many methods in use for the support of the perineum during labor, he described a method which he had used for several years. When the perineum begins to bulge, the patient is placed across the bed, with the limbs in the lithotomy position and the knees close together. A towel or bandage ten inches wide and a yard and a half long is placed around the buttocks and perineum, with the upper edge of the bandage on a level with the fourchette. The ends of the bandage are given to two assistants, who sit on each side of the patient, or, if the bed is narrow, they take their positions at the head of the patient. They are told to make traction during each pain. The accoucheur sits in front of the patient and sees that the traction is made in the proper direction. Care must be taken that the towel is smoothly applied to the perineum. The forceps may be used with the towel in position. This method is comfortable to the patient, and does not necessitate exposure.

Dr. Chadwick said that he had been in the habit of using the method practised in Vienna, which consists in having the patient on the side, with the accoucheur sitting by her side. He then passes one arm over the thigh, and, interlocking the fingers with those of the other hand, is able to make any desired amount of pressure on the advancing head, thus delaying it until the perineum is thoroughly stretched. He is careful that the head shall not be born during a pain.

Dr. Ellwood Wilson, of Philadelphia, stated that the only plan he employed was to see that the woman kept her mouth open during the last pains.

Drs. Reamy, Wilson, Mann, Johnson, and Reynolds also took part in the discussion.

Dr. Sutton objected to the method referred to by Dr. Chadwick that it had a tendency to

cause premature extension of the head, thus increasing the peril of the perineum.

Dr. Edward W. Jenks, of Detroit, reported

A CASE OF CÆSAREAN OPERATION.

The patient was a well-proportioned woman, 27 years of age, in her second labor. The first labor had not been particularly difficult, and had occurred five years previously. Two years later she had sustained a fracture of the right ilium, which was the cause of difficulty in the second labor. Labor began at three o'clock in the morning, and the physician was called. As there seemed to be some difficulty, he attempted to apply the forceps. One blade was readily gotten in place, but the second could not be introduced, and then the projecting ridge of bone was discovered. A second physician was called, who also failed to apply the forceps. A third was called in consultation, and the forceps were again tried. Craniotomy was then decided upon and performed, but the head could not be brought down.

Dr. Jenks was then telegraphed for, and arrived at the house at 9 P.M. In order to be certain that it was impossible to apply the forceps, he made the attempt, but was unable to introduce the second blade. Neither could the cephalotribe be introduced. It was then decided to perform abdominal section. This was done at 2 A.M., nearly twenty-four hours after the beginning of labor. The woman was, however, in good condition. When the uterus was cut through, the placenta was found attached immediately beneath the cut, and the bleeding was alarming. Delivery was rapidly accomplished and the hemorrhage stopped. The uterine wound was brought together with silk sutures and the abdominal incision closed. The patient reacted well and did nicely until the third day after the operation, when—the nurse leaving the room in disobedience to orders—the patient got out of bed, was seized with a severe pain, and died in the course of twenty-four hours.

DISCUSSION.

Dr. Skene, of Brooklyn, thought that laparo-elytrotomy would have been better suited to this case.

Dr. Jenks said that laparo-elytrotomy had been considered, but the other operation preferred. The patient would probably have recovered if it had not been for the unfortunate accident.

Dr. Ellwood Wilson, of Philadelphia, made some

REMARKS ON THE USE OF TARNIER'S FORCEPS.

At a previous meeting the speaker had presented a number of objections to the Tarnier instrument. Since then he had used the forceps in several cases with advantage, and he wished to correct the statements which had been made on theoretical grounds. A detailed account of nine cases in which the Tarnier forceps had been used with benefit was then given.

He had used the modification of the Tarnier forceps devised by Dr. William T. Howard, of Baltimore.

Dr. Niell, of Baltimore, presented his modification of the Tarnier forceps, which consisted in adapting the Tarnier principle to the Simpson forceps in such a way that the traction bars could readily be detached.

The paper was discussed by Drs. Parvin, Goodell, Mann, Wilson, Howard, and Reamy.

THURSDAY, THIRD DAY.

Dr. R. Stansbury Sutton, of Pittsburg, described

A MODIFICATION OF EMMET'S CERVIX OPERATION, WITH A CASE.

While the operation was original with the speaker, he did not claim to have been the only one who had performed it. In every case of lacerated cervix which has lasted for any length of time, the lips of the cervix are indurated and covered with cicatricial tissue, which greatly interferes with coaptation of the lips in performing the operation. This cicatricial tissue is especially abundant in those cases in which nitrate of silver applications have been employed. The condition may be limited to one lip, or it may affect both.

The case described was operated on in June, 1885. She was 42 years of age, the mother of several children. There was a double laceration of the cervix, and the anterior lip was much hypertrophied and as hard as cartilage: it was convex from side to side as well as from before backward. The posterior lip was denuded in the ordinary manner, with the exception that the median strip of mucous membrane was left wider than usual. The anterior lip was denuded clear across, and all the cicatricial tissue removed. The lips were then united in the ordinary manner. The result had been excellent. A probe could be readily passed, and the patient menstruated without difficulty.

DISCUSSION.

Dr. Goodell had employed this method in some cases. He had also at times outlined the strip of mucous membrane corresponding to one side of the new cervical canal and dissected it from the indurated tissues below, which were then removed. The strip of mucous membrane was then brought in place and the lips treated in the ordinary way. This had given a good result.

Dr. Skene, instead of using the method described by Dr. Sutton, had been in the habit of performing a preliminary operation to get rid of this indurated tissue. This consisted in removing a transverse, wedge-shaped piece from one or both lips as might be required,

and bringing the surfaces together with silk stitches. After the size of the cervix had been reduced, the ordinary operation was performed. This had given good results.

Dr. George J. Engelman, of St. Louis, had in these severely indurated cases paid no attention to the retention of the median strip of mucous membrane, but denuded both surfaces completely across and brought them together. In the position of the future canal he placed one strand of carbolized silk thread. After the removal of the sutures, the passage was dilated with the probe. This operation has been followed by a perfect result so far as union, involution, and the health of the patient are concerned.

Dr. Mann had also employed the method described by Dr. Sutton.

Dr. Baker considered that the retention of the strip of mucous membrane was of importance, and thought that Dr. Emmet's operation could always be done in these cases by adopting the suggestion of Dr. Skene. He, however, preferred to do both operations at one time.

Dr. William Goodell, of Philadelphia, read a paper on

INFLAMMATION OF THE PAROTID GLANDS FOLLOWING OPERATIONS ON THE FEMALE GENITAL ORGANS.

The speaker referred first to the close relation which is known to exist between the salivary glands and the genital organs of the adult.

He had seen the parotid gland suppurate after a posterior incision of the neck of the uterus. He had had parotid bubo once in one hundred and fifty-three ovariotomies. This occurred in a woman with an immense tumor. At the time of operation she was suffering with septic symptoms following tapping of the cyst. She died on the twenty-second day. He had also seen cases in which there was transferrence to the parotid glands, in which there were no symptoms of septic poisoning. He had seen three such cases. Two followed ovariotomy and one followed oöphorectomy. Not one of the three cases ended fatally, and the speaker regarded the affection as sympathetic rather than symptomatic.

DISCUSSION.

Dr. Sutton reported one case in which this complication appeared after ovariotomy. The patient was almost convalescent, when one gland began to swell. In a week the second gland began to swell. The temperature was one or two degrees above normal. There was some diarrhœa, but no tympany and no soreness over the abdomen. A crop of rose-colored spots appeared over the abdomen and arm. During the third week she became much worse and died. He regarded the case as septicæmic, although others considered it a well-marked case of typhoid.

Dr. Johnson had seen swelling of the parotid glands follow in one case of ovariotomy, ending fatally on the sixth day.

Dr. Mann reported three cases: once after ovariotomy with distinct septic symptoms, ending fatally; once in a case of ovariotomy and hysterectomy, ending in recovery; and once after a penetrating wound of the abdomen, ending in recovery.

Dr. Emmet had seen two cases: once after an operation for lacerated cervix, the patient recovering; once after operation on a small vesico-vaginal fistula, ending fatally.

Dr. Baker reported one case of suppuration of the left parotid gland after Tait's operation. The patient recovered.

Dr. Reamy described two cases. One followed Tait's operation: the patient died. The second was after supra-vaginal hysterectomy: the patient recovered.

Dr. James R. Chadwick read a paper entitled

PERISTALSIS OF THE GENITAL TRACT, AND A NEW THEORY TO EXPLAIN RELAXATION OF THE VAGINAL OUTLET DURING LABOR.

[The scope of this paper is indicated by its title: it cannot be presented in abstract so as to do it justice.—Rep.]

The last paper read was by Theophilus Parvin, M.D., of Philadelphia, and was entitled

FACIAL PARALYSIS IN THE INFANT FROM THE USE OF THE OBSTETRIC FORCEPS.

March 15, 1885, the speaker was called to a case of delayed labor. The first stage had lasted twenty-four hours, and the second stage eight hours. The position was a left occipito-anterior. The only cause of difficulty seemed to be the weak contractions of the uterus. The Davis forceps were therefore applied, and the child was delivered. The following day it was noticed that when the child cried the left side of the face was immovable, the skin smooth, and the eye open. There was scarcely a trace of the pressure of the forceps. The paralysis disappeared in ten days without treatment.

This case was made the basis of a full *résumé* of the literature of the subject.

DISCUSSION.

Dr. Skene referred to the importance of diagnosing facial paralysis the result of injury from facial paralysis the result of apoplexy, for this condition is not infrequent in young infants. As a rule, the diagnosis is not difficult; but when, as in a case which he had recently seen, there was paralysis of the facial nerve from pressure of the forceps associated with paralysis of the arm from injury of the shoulder in hurried delivery, there might be some uncertainty. The presence of ecchymosis would tend to clear up the diagnosis.

The paper was further discussed and cases reported by Drs. Ellwood Wilson, William Goodell, and William L. Richardson.

At the business meeting the Nominating Committee presented the names of the officers for the ensuing year, who were elected:

President.—Thaddeus A. Reamy, M.D., of Cincinnati.

Vice-Presidents.—Theophilus Parvin, M.D., of Philadelphia, and George J. Engelman, M.D., of St. Louis.

Secretary.—Joseph Taber Johnson, M.D., of Washington.

Treasurer.—Matthew D. Mann, M.D., of Buffalo.

Members of Council.—F. P. Foster, M.D., J. C. Reeve, M.D., B. B. Browne, M.D., and R. B. Maury, M.D.

The following new members were elected: Dr. J. B. Hunter, New York; Dr. Charles Jewett, Brooklyn; and Dr. W. H. Parish, Philadelphia.

The next meeting will be held in Baltimore, Maryland, September 21, 22, and 23, 1886.

The Society then adjourned.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, SEPTEMBER 3, 1885.

The President, B. F. BAER, M.D., in the chair.

DR. B. F. BAER read the following report of a case of

OVARIAN CYSTOMA COMPLICATED WITH PERITONITIS AND PHLEGMASIA ALBA DOLENS—DOUBLE OVARIOTOMY.

Mrs. M., æt. 31, has been a widow nine years. She had one child ten years ago, and had enjoyed good health until about three years before I saw her. At that time she observed that her abdomen was increasing in size. This gradually progressed for eighteen months, when she was large enough to attract the attention of her neighbors. After this the growth remained almost stationary, and did not affect her general health until the latter part of March of the present year, when she was suddenly seized with pain in the left iliac region. The pain was acute and radiating in character, extending principally down the anterior portion of the left thigh. She attributed the attack to an unusual exertion. Although she made an effort to continue her vocation (that of seamstress), she was compelled to give up and send for her physician, my friend Dr. John R. Haney, of Camden.

When Dr. Haney first saw her, her abdomen was very tender over its entire surface, purple from congestion, greatly distended, and tympanitic in its upper but dull in its lower portion. She was suffering great pain, and had constant nausea and vomiting; her skin was hot; pulse 120, and temperature 103°. From the history, symptoms, and physical signs elicited, the doctor diagnosticated ovarian cystoma with supervening peritonitis. He administered quinine per rectum and morphine hypodermically, together with counter-irritation over the abdomen. Within a week the patient appeared to be better, when, through the kindness of Dr. Haney, I first saw her. The tympanitis had disappeared, and the pain was not so severe, but the abdomen was still very tender on pressure, especially in the left iliac and right umbilical regions; her features were drawn and flushed and presented an anxious expression; her tongue was dry and heavily coated; pulse quick, and temperature 102°. She lay quietly in the dorsal position, with her thighs flexed. The abdomen was as large as at full term of gestation, and was projecting. It was dull on percussion everywhere except along the line of the colon and in the epigastrium, and there was evident fluctuation. The uterus was retroverted, not freely mobile, and very tender on pressure on the left side. Above and upon it could be felt the lower border of the circumscribed growth which occupied the abdominal cavity. I fully agreed with Dr. Haney's diagnosis of ovarian cyst complicated by peritonitis. As she seemed to be somewhat better, I advised a continuance of the treatment as previously pursued, with the hope of obviating the necessity of ovariotomy during the unfavorable condition in which she then was. The peritonitis continued to improve slowly, but a new trouble presented itself in a very painful swelling of the left lower extremity. This continued until the limb was greatly increased in size. Its temperature was much higher than that of its fellow, which seemed to be in a normal condition. She now required large doses of morphia to relieve her pain, and she was losing flesh and strength. She still had nausea, and took almost no nourishment. Her temperature and pulse had again risen to the highest point noted. Both she and her friends were willing and anxious that we should do something more radical than simply to wait for a more favorable condition for operating, if we deemed it proper. I believed, from the symptoms and physical signs, that the inflammatory action was external to the cyst and not within it, and for that reason decided to wait for a subsidence of the acute symptoms, which I rather confidently expected. At the same time I held myself in readiness to operate at once, should the patient not improve or become worse.

The next day she showed signs of slight improvement. Treatment, both local and general, continued. The acute symptoms gradually subsided to those of a subacute condition. The temperature had decreased to 101°; pulse 100, but weak. She was still

unable to retain food, and was extremely weak. I advised further delay. But she did not improve much after this, her temperature and pulse remaining about the same as noted above. Her stomach had regained its power to a slight degree to retain and digest liquid food.

She had now been confined to her bed more than two months; her left leg was powerless; there had not been the slightest improvement during the two previous weeks. We therefore decided to remove the tumor.

Operation.—June 19, 1885, assisted by Drs. J. R. Haney, W. A. Davis, and H. M. Christian, and in the presence of a section of the class from the Polyclinic, I made an incision three inches in length down to the peritoneum, and then checked the hemorrhage, which was quite free, with clamp-forceps. I next very carefully incised the peritoneum, and found, as I had expected, that it was closely united to the cyst-wall. These adhesions of cyst to peritoneum were universal, and it required careful and patient manipulation to separate them. The parts were exceedingly vascular, and hemorrhage was profuse. After separating it as far as possible, I tapped the cyst and allowed the contents, which were semi-liquid and chocolate-colored, to drain away. I next closed the puncture made by the trocar, and then completed the separation of the cyst from its adhesions and removed it. As there was a very general and free oozing of blood from the broken vessels, I introduced a number of large flat sponges and spread them over the bleeding surface. An assistant now made firm pressure upon the external surface of the abdominal walls, whilst I ligated the pedicle and removed the tumor. The cyst developed in the left ovary, and the pedicle was slender, not unusually vascular, and of good length. The right ovary was diseased, contained a number of small cysts, and was double the normal size. I removed it also. Examination showed that the hemorrhage had almost ceased, but there were still a number of points from which blood flowed. The peritoneum was intensely injected, and I disliked very much to pick up bleeding points, for fear of making the hemorrhage worse. I therefore reapplied a large flat sponge and had firm pressure again made from without, whilst I proceeded to place the sutures for the closure of the incision. I then removed the sponge, and found very little blood upon it. I replaced it by a long narrow strip of sponge, which I allowed to project from the lower angle of the wound, and then again cleansed Douglas's cul-de-sac and other dependent portions of the peritoneal cavity, after which I quickly tied the sutures from above downward, removing the long sponge through the lower angle of the wound before I had encroached so closely upon it as to compress it in its removal. It was only slightly stained. I quickly applied the external dressing, making an unusual amount of pressure by cotton and bandage.

The operation was finished, but the patient bore it badly. Her extremities were cold and purple, her face livid, and pulse very weak. Stimulants hypodermically and the application of external heat, which were begun during the operation, were continued after she was returned to bed. She remained in an almost collapsed state for many hours, but gradually reacted, and the next morning was in a fair condition. Her temperature was lower than it had been for weeks; pulse 112, but weak; stomach quiet; no pain; no tympany. She had taken an occasional small piece of ice, but nothing else except the morphine since the operation.

June 21.—Temperature 102°; pulse 120. Slight pain and tenderness in left iliac region. She had been very weak and faint during the night, for which brandy had been administered in repeated small doses. The swelling and pain in the limb had diminished. She had not vomited since the operation, and felt hungry. Ordered a teaspoonful of milk every second hour.

June 22.—Comfortable and doing well. Temperature 99⅘°; pulse 90, and strong. Slight metrostaxis; passed flatus per rectum. Milk increased to a tablespoonful, and retained.

June 24.—Temperature 99°; pulse 85. General condition greatly improved; no pain; no tympany. Examined wound, and found it united throughout; removed sutures.

June 25.—Doing well, and is bright and cheerful. She took nearly a quart of milk during the last twenty-four hours, and digested it.

June 30.—She has been gradually improving. Temperature normal; pulse 95. Bowels moved to-day. She is taking solid food, and expresses herself as feeling quite well. Limb improving; she can now move it.

July 12.—Sat up to-day for the first time,—the twenty-second after the operation.

August 30.—A note received from Dr. Haney to-day informs me that Mrs. M. is going about attending to some of her duties, but that she has not yet regained her strength fully, and that her limb is still weak.

The recovery of this woman under the forlorn circumstances just narrated is certainly a great triumph for our art, but the case serves a better purpose in forcibly illustrating the danger of deferring operative interference in ovarian cystoma simply because the patient is comfortable and suffering no inconvenience from the presence of the tumor. The subject of an ovarian tumor is in constant danger of injury from slight causes which may produce such changes in the tumor as to render what might have been a simple and safe operation one of extreme hazard. This had been a simple, slow-growing cyst, and had not markedly affected the health during its three years

of existence; yet it suddenly became inflamed, and the patient narrowly escaped death as a result. The case furnishes a strong argument in favor of operation as soon as the disease is diagnosticated. Of course there are qualifications, and each case must be decided on its own merits; but the rule that an ovarian tumor should be removed as soon as it is known to exist, is the only safe one to follow.

As a striking contrast to the case just related, and to show the value of the principle enunciated, I will report the following case of

POLYCYSTIC OVARIAN TUMOR—DOUBLE OVARIOTOMY.

A. R. was sent to me August 5, 1885. She was 19 years of age, single. Puberty was established at sixteen, and she had menstruated regularly until six months previously. She then without cause, so far as she knew, began to flow more freely at her periods, and they continued longer. About the same time she noticed a small lump in the right iliac region. This increased in size so that soon the entire hypogastrium was distended, and when I first saw her she was as large as at the eighth month of gestation. Her face showed marked signs of emaciation and pallor, and the drawn, anxious expression of ovarian cystic disease. She was then having a profuse metrorrhagia every two weeks. She had not suffered any pain, and up to within a few weeks very little inconvenience, except for the frequent metrorrhagia.

During the last month, however, her health had been failing. She had lost flesh, had a weak, languid feeling, and suffered much from the weight of the growth. Physical examination in the dorsal position revealed a projecting, slightly irregular abdomen, larger on the right side, dull on percussion over the entire anterior surface, but resonant along the line of the colon. Palpation showed imperfect fluctuation and several firm, irregular masses within the abdominal cavity. The vagina was virginal, the cervix uteri was pointing forward, the body of the uterus retroverted, the whole organ enlarged and soft. It was only slightly movable independently of the tumor. The sound gave a measurement of three inches.

I diagnosticated polycystic disease of the right ovary, and advised immediate operation. Six days afterwards—on August 11—she entered my private hospital, and on the 13th I operated, with the assistance of Drs. H. M. Christian and J. N. Richards. I made an incision two and a half inches in length, and came upon the surface of the tumor, which presented the white, glistening, nacreous appearance especially common to thick-walled polycysts. Tapped with Hodge's trocar. The contents were so thick that they flowed very slowly, and it was necessary to puncture several smaller cysts, which was done without removing the instrument. Even then the mass did not collapse much, because of a large number of young or child-cysts. After closing the puncture I enlarged the incision to three inches, but I had considerable difficulty in removing the tumor. It was necessary to make firm traction with rotatory movements, whilst Dr. Christian exerted a counter-force and pressure through the abdominal walls. Fully ten minutes were occupied in delivering the tumor after it was tapped, but I was rewarded with an incision that looked so small that it seemed almost incredible that this large mass had passed through it. There had not been a single adhesion, but the pedicle was short, thick, and vascular. I tied it with Tait's Staffordshire knot, cut the tumor away, and dropped the stump. The tissues of the left ovary were found to be entirely disorganized and degenerated into a cyst as large as a walnut. This I also removed. The uterus presented a very vascular appearance, and was somewhat enlarged. After assuring myself that the peritoneal cavity was entirely free from any foreign matter, I closed the incision, dressed the wound, and returned the patient to bed. Temperature normal; pulse 96; no pain; but, as she felt a little sore and restless, one-quarter grain of morphine was given hypodermically; small pieces of ice for thirst.

August 14, 8 A.M.—Temperature 99°; pulse 84. Had passed a good night. At 1 P.M., twenty-six hours after the operation, milk in teaspoonful-doses was allowed; water when she desired it.

August 15.—Metrostaxis began this morning.

August 18.—Union complete; removed sutures.

Her recovery was uninterrupted. She sat up for a few minutes on the eleventh day, and went home—eight miles—in a carriage on the eighteenth day after the operation. To-day she sent a request to be permitted to go out, because she is feeling so well.

Certainly nothing could have been gained by procrastination in this case.

DISCUSSION.

Dr. GOODELL congratulated Dr. Baer on the good results obtained in such a serious case as that first reported. Great care in the asepsis of these cases should be observed. In one of his cases of septicæmia, before the operation, after complete union had been secured, the stitches had been removed, and after the patient was up an abscess was observed forming in the line of union, and was very persistent. Finally, after careful search, a ligature which had been tied around the pedicle of one of the ovarian cysts was found and removed. Subsequently the other appeared, and after its removal the abscess healed.

He did not like to remove the stitches so early as Dr. Baer removed them, and he reminded Dr. Baer of a case in which he had assisted Dr. Goodell. The operation was performed upon December 5: convalescence

was rapid, and the patient was so impatient to be home on Christmas that she could not be restrained, and on the nineteenth day after the operation she took the cars for home. The train was derailed, and the jolting caused the cicatrix to open. The physician who was called in closed it immediately, and the patient recovered. In another case, a cough caused the wound to burst open and reveal the bowels after the stitches had been removed. This patient also recovered. For these reasons he never removed the stitches before the eighth day, and not until the bowels had been opened.

Dr. Goodell inquired of Dr. Baer his method of closing the opening in the cyst after it had been tapped, preparatory to its removal from the abdominal cavity. Does he employ pressure-forceps? What method of dressing the abdominal wound?

Dr. BAER closes the cyst-puncture with Wells's clamp-forceps when the cyst-wall is strong enough. In some cases he stitches up the opening, or ties a string below it when the cyst-walls are loose and soft. He closes the external wound, as he had been taught by Dr. Goodell, with silk sutures, and dresses it with salicylated or absorbent cotton, adhesive strips to hold the cotton in place and take the strain off from the stitches, and over all a bandage. He removes the sutures on the fourth or fifth day, in order to avoid the danger of pus forming in the suture-tracks, as has sometimes occurred when he has allowed them to remain as long as eight days.

UTERINE DILATOR.

Dr. GOODELL exhibited his improved *uterine dilator*. He said that the main difficulty in the operation for the rapid dilatation of the cervical canal lay in the liability of the blades of the instrument to slip out. This he had in a great measure overcome by having shallow grooves cut into them. Into these grooves the tissues sank, and the resulting friction kept the instrument in place.

Since he had called the attention of the Society to his instrument, not quite a year ago, he had performed the operation forty-one times for dysmenorrhœa and sterility, making in all two hundred and nine such cases. In not a single instance had dangerous symptoms followed, and the average of success was a very large one. He had become firmly convinced that for dysmenorrhœa and sterility the operation of rapid dilatation of the cervical canal would, except in some very rare cases of stenosis of the os externum, wholly supersede the cutting operation, the use of tents, or the slow dilatation by any means whatever. For by the former not only was the measure of success far greater, but the danger from inflammation was very much less. He dilated the parts from three-quarters of an inch to one inch and a quarter, as measured off by the register in the handles, watching the cervix carefully to see what strain it could bear. His instrument could be opened to the width of one and a half inches, but he resorted to that extreme divergence only when wishing to introduce his finger for diagnostic purposes. This he could not ordinarily do unless the parts were relaxed from hemorrhage. Usually, however, when suspecting the existence of a polypus, he did not find it needful to pass in his finger; for, after a moderate dilatation, he introduced a fenestrated forceps and opened it at hap-hazard. In this manner he has repeatedly caught and twisted off a polypus without knowing it was present, the subsequent removal of the growth through the os uteri being the most difficult part of the operation.

Dr. BAER was strongly impressed, by the case of a lady whom he had delivered to-day, as to the advisability of entirely giving up division of the cervix. A year and a half ago he had slit up the cervix posteriorly, and to-day he felt very anxious during the first stage of labor as to the probability of laceration of the uterus starting from the seat of the former operation. The anterior lip was very long, coming down under the pubis, and the posterior lip could not be felt. The case will be reported fully.

When the uterus contains a polypus, the continued hemorrhages reduce the contractility, and a single dilatation will sometimes enlarge the os sufficiently to admit the finger or forceps; but if the uterus is healthy it contracts immediately after the withdrawal of the dilator. He could not recall an instance of inflammation following rapid dilatation. Sterility of long standing is seldom cured by dilatation or any other means.

Dr. C. M. WILSON had seen recently, in the practice of Dr. Ellwood Wilson, a uterus the cervix of which had been divided bilaterally some years ago. The operation had resulted in the development of the symptoms peculiar to a bad laceration of the cervix, with ectropion. Trachelorrhaphy was performed by Dr. Agnew, with complete relief to the patient. Dr. Wilson mentioned this case to call attention to the change in opinion and practice since Emmet proposed his operation.

Dr. LONGAKER inquired as to the prevention of slipping of the dilator, and called attention to the original method of pressure over the fundus of the uterus.

Dr. J. G. ALLEN has performed rapid dilatation over seventy-five times, and has never seen any bad results from the operation. The blades of his instrument diverge as they separate, and there is then no disposition to slip out. The blades are more curved than in Dr. Goodell's instrument; he thinks that an advantage in holding the instrument in place: the handles are turned up so as not to touch the bed or table.

Dr. GOODELL prefers the slight curve, so

that in flexion of the uterus he can introduce the dilator with its curve reversed to the bend in the womb, and, by opening the dilator in that position, rectify the flexion of the organ. He prefers parallelism of the blades because the stenosis of the cervix is greatest at the external os, and there is no need for dilatation above the internal os. He considers it dangerous to press the fundus of the uterus down while using the dilator, for fear of wounding or even penetrating the tissues, and he uses a strong tenaculum to hold the organ; but since he had got Mr. Gemrig to roughen the blades by grooves he had not been annoyed by the slipping of the instrument.

Dr. GOODELL exhibited two specimens of

PAROVARIAN CYSTS.

In each case the cyst was so detached from the ovary that the former could have been taken away without injury to the ovary. He was greatly tempted to practise conservative surgery in these cases and leave the ovaries untouched; but, on account of apparently incipient cystic degeneration, they also were included in the ligature and removed. Both these cases were operated on in his private hospital, and both had recovered.

In his experience, the removal of parovarian or of broad-ligament cysts was one of the most successful of operations. Out of a large number which he had performed, he could recall but a single fatal case, and in that the result seemed hardly due to the operation. The lady lived in a distant city, and he did not see her after the operation, which was a very easy one. At the end of a week the bowels were moved, the stitches removed, and everything gave promise of an unusually prompt convalescence. On the twelfth day, however, she was seized with uncontrollable vomiting, and she died on the seventeenth day. Six months previously she had had an analogous attack of vomiting, from which she barely escaped with her life. Thus far this year he had had eighteen ovariotomies, and this was the only fatal case among them.

Dr. MONTGOMERY wished to ascertain the opinion of the Society as to the advisability of removing the second ovary when, in an operation for the removal of an ovarian cyst, the other ovary was found to be slightly diseased. In his first ovariotomy, performed in 1879, the second ovary was found to contain numerous small cysts. It was not removed, and the patient has since been twice pregnant, and there has been no appearance of another tumor, nor any symptoms referable to the remaining ovary. If the climacteric has been passed, there would be no question about it.

Dr. BAER inquired if tapping ever cured parovarian cysts. It was formerly reported as a means of cure. Do they always return after tapping? Would Dr. Goodell recommend tapping in undoubted parovarian cyst? He himself felt strongly inclined towards abdominal section in all cases. He thinks the second ovary should be removed when it is not healthy, as the idea of a second operation is very depressing to a patient.

Dr. MONTGOMERY knew of one instance of parovarian cyst which had been tapped and had refilled seven times. It was finally removed by him by peeling out the cyst, as, on opening the abdomen, he found the tumor universally adherent. Only one ligature was required,—viz., on the stump of an enlarged ovary which bulged prominently into the cyst-cavity.

Dr. J. G. ALLEN considered that as an ovary somewhat diseased may give rise to a pregnancy, it should be left. We know too little about the probability of the development of such small cysts into large ones. Until we have certain data on the subject, it must be considered a case of want of information and knowledge.

Dr. PARISH was in accord with Dr. Allen as to the want of knowledge. He has seen diseased ovaries containing numerous small cysts in many autopsies, and there had been no symptoms during life to excite a suspicion of their existence. The existence of minute cysts cannot be considered as proving any liability to the production of large ones. If the second ovary contained a cyst as large as a partridge's egg, he would remove it; but if numerous cysts as small as split peas were present, he would not. The possibility of conception should be considered as well as that of a cyst.

Dr. GOODELL acknowledged the truth of the points made by Drs. Allen and Parish, and he believed that he had repeatedly removed the second ovary unnecessarily. Yet the history of his own ovariotomies shows a return of the disease in the remaining ovary in about two per cent., and he thought he erred on the safe and right side. The social conditions of the patient would always have a great weight with him. If an heir were wanted or the patient were young, he would leave a suspicious-looking ovary or try to remove the diseased portion of it. But in the majority of his cases where there was any doubt he removed the ovary. Of course, under such a rule he must remove ovaries which might never give any trouble in the future. But the mental agony of women when informed that the operation must be performed a second time upon them, and, on the other hand, the great joy and satisfaction of patients when assured, after the close of an operation, that both ovaries had been removed, have determined him that, other things being equal, it is better to remove the second ovary.

As to the cure of parovarian cysts by tapping, his own experience is not sufficient yet to decide absolutely. He would advise the

radical operation; but if the patient, after understanding the liability of return, wished it, he would tap, as there was but little danger from tapping such cysts. A patient was tapped by Dr. Atlee some twenty years ago; five years afterwards the cyst filled, and was tapped by Dr. Goodell. It then partly refilled, and so remained for a long while; the fluid then was gradually absorbed, and never returned. He has had, besides this one, two cases which he tapped, one five years ago and the other three years ago, and there has been no return whatever of the fluid. On the other hand, he has had two or three cases in which the cyst burst spontaneously several times and yet refilled invariably. The rupture was followed immediately by some collapse and pain, and later by an excessive secretion of urine with complete subsidence of the tumor. He had also heard of several cases of rupture, but, as far as he has learned the history of such cases, the cyst has always returned. The reports of the cure of ovarian cysts by tapping and injection of tincture of iodine must be true only of parovarian cysts.

Dr. HARRIS knew of a case of parovarian cyst in which fourteen years had elapsed between the tapping and the subsequent refilling.

(To be continued.)

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, APRIL 23, 1885.

The President, E. O. SHAKESPEARE, M.D., in the chair.

NOTES ON THE MORBID ANATOMY OF PNEUMONIA.

DR. OSLER read a paper summarizing his experience while Pathologist at the Montreal General Hospital. Of one hundred and five autopsies in cases of lobar pneumonia of which notes were available, five were discarded for various reasons. The mortality at the hospital is high, on account of the large percentage of grave cases which are admitted, very many subjects being debilitated and dissipated.

Of the one hundred cases, seventy were males and thirty females. Of ninety-four instances in which the age was given, there were eleven cases under twenty years, twelve between the twentieth and thirtieth, eighteen between the thirtieth and fortieth, twenty between the fortieth and fiftieth, twelve between the fiftieth and sixtieth years, and twenty cases over sixty. In fifty-one cases the right lung was affected, in thirty-two the left, in seventeen both. Other details were given of the various lobes affected. The heaviest lung weighed was two thousand three hundred and three grammes, and in eight instances the affected organ weighed over two thousand grammes. In about fifty per cent. of the cases there was red hepatization, in thirty per cent. mixed red and gray, and in about twenty per cent. gray hepatization. The condition of the pleural air-passages, bronchial glands, and unaffected portions of the lung-tissue were described. Among the terminations there were four instances of abscess formation, three cases of gangrene, and one in which there was a process of fibroid induration beginning in the lung. This case was a man aged 55, admitted with pneumonia of the right lung five days after the initial chill. Resolution did not occur, and he died in the fifth week. Post mortem, the right lung was found solid, grayish in color, and in many areas the tissues had a smooth, homogeneous, translucent aspect, and in these a fibroid change was going on; the alveolar walls were thickened, and the fibrinous plugs in the air-cells seemed undergoing transformation into connective tissue. (A slide was shown illustrating this.) There were no caseous portions, and no tubercles.

As to the other organs, the frequency with which large, firm clots were found in the heart was specially dwelt upon. In only thirty-five instances was the spleen much enlarged. In one it weighed six hundred and seventy grammes. In twenty-five per cent. there were marked fibroid changes in the kidneys. Of the complications, there were four cases of pericarditis and sixteen cases of endocarditis. In eight instances the meninges of the brain were inflamed, in five of them associated with ulcerative endocarditis. In five instances there was acute croupous or membranous colitis, and in one instance croupous gastritis.

Dr. TYSON, in the discussion of Prof. Osler's paper, said that he had been rather incredulous of the termination of croupous pneumonia in fibroid induration, but the specimen exhibited by Dr. Osler demonstrates conclusively that such a condition exists. The facts presented in the paper are such as are not generally collated. Collective reports of autopsies in cases of particular forms of disease would be of great value in the study of pathology.

Dr. FORMAD asked Dr. Osler why his was not a case of acute phthisis. Croupous pneumonia is a very common accident in acute phthisis. It is croupous pneumonia which causes death, which is well shown by recent investigations of Mercur, of the University of Pennsylvania. Dr. Formad did not believe that croupous pneumonia can last five weeks.

Dr. SHAKESPEARE said that the remarks of Dr. Osler about the frequent existence of very firm clots in the right heart, extending into the ventricles, can be corroborated by any one who makes autopsies of cases of pneumonia at hospitals. He had seen them in cases of phthisis

quite as extensive and firm, reaching into the vessel going to the affected part of the lung. It is interesting to note the systemic involvement of these cases of croupous pneumonia, and the affection of internal organs as well as lungs in the process which has been regarded as a local disease. We have to do with a general, wide-reaching affection rather than local inflammation. The opinion was advanced by Dr. Osler that the exudate in the air-cells organized, that the process in the organization of the croupous exudate is similar to that in the clot in arteries after ligation, and that comparison was the point which Dr. Shakespeare wanted to bring out. Dr. Shakespeare said that he did not believe that a blood-clot in a vessel ever organizes, and his opinion is based on facts detailed in an investigation which he has published on the healing of arteries after ligature. The vessel healed not by the agency of the white cells caught in the meshes of the reticulum, but by proliferation of the endothelium of the tunica intima and subjacent connective-tissue cells. He thought there was reason to believe that there is in this process in the lungs an analogue of the process after ligature. We have to do with an outgrowth of the inter-alveolar walls. The ground which Dr. Shakespeare takes is purely that of analogy to the process in a blood-clot in a ligatured artery.

Dr. OSLER, in closing the discussion, said that it was well known that a croupous pneumonia might persist five or six weeks, or even longer, before resolution took place. It was difficult for any one who had not had the experience to realize the anxiety which such a case would cause. He had reported two such cases of delayed resolution, one in the fourth week and one in the eighth, both with perfect recovery. He was quite aware of the difficulty in distinguishing certain cases of acute phthisis from pneumonia, and had seen a case with Dr. Ross in which the diagnosis was for some time in doubt; but in the case in question the person had been under observation from the outset, and the symptoms were those of ordinary pneumonia. Post mortem there were no caseous masses, no miliary tubercles; only the condition already described. The termination in fibroid induration, though rare, was frequently well recognized. In Cornil and Ranvier's Manual, as well as in Green's Pathology, was a figure which might have been taken from the slide under the microscope.

Dr. M. H. FUSSELL, of Manayunk, presented specimens from a case of

PRIMARY TUBERCULOSIS OF THE KIDNEYS.

The reporter never saw the subject alive from whom the specimens were removed, having performed the post-mortem examination for a friend.

Case of Edward B., æt. 40, single, by trade a paper-maker. In following his calling he was forced to stand in a dust-loaded atmosphere from morning until night. He worked at this trade from boyhood steadily, with the exception of four years during the late war. His grandfather died of bladder-trouble; his father died of apoplexy; his mother, brothers, and sisters are all living and healthy. He was always a robust man; his weight was one hundred and seventy pounds, and he never had any serious illness; he had gonorrhœa during the war. Four years ago, while in camp, he made a misstep and fell. The next morning he passed much blood in his urine. Previous to this he was perfectly well. From this time until death he was troubled with slight pain in his loins and with frequent micturition; his urine was sometimes bloody, sometimes milky. The patient's bladder finally became incontinent, and he was forced to wear a urinal.

The patient's general strength did not seem to suffer until the past six months, when he began to lose flesh and strength, and at death he was much emaciated. He had never had any cough or diarrhœa. Two weeks before death he began to vomit: this increased in frequency until he was unable to retain anything on his stomach. Just before death breathing was rapid and full. The patient was very restless, vomited, and passed urine freely. The pupils were dilated.

Dr. Fussell examined the urine several times. The specific gravity ranged from 1.002 to 1.010. Large amounts were passed. Albumen was present. The microscope showed pus, blood, and granular epithelium. Many of the cells were irregular in shape, the pyramidal form predominating. No casts were found at any time. Unfortunately, a critical physical examination of the patient was never made. At different times surgeons had sounded him for stone and had failed to find any.

Post-Mortem.—Nothing especial noted on the exterior of the body. *Thorax:* Heart about normal in size; the muscle looks normal, and contains a large amount of fluid blood and currant-jelly clots; a small decolorized clot on the left side; valves normal.

Lungs: Both pleural cavities obliterated; the pleuritic adhesions were tough, the lungs being with difficulty torn from the cavity; in places the pleura was much thickened; the surface of both lungs was studded with miliary tubercles; on section, the lung-substance was crepitant and studded with myriads of miliary tubercles; no caseous masses nor cavities were found in either lung; the bronchial glands were enlarged, not caseous.

Abdomen: Viscera in normal position; peritoneum free from tubercles and of a healthy look.

Liver of normal size and color; over the surface a few stellate cicatrices noted, but no tubercles seen on the surface, nor on section of the organ; the bile-ducts free.

The stomach contained greenish-black fluid, the mucous membrane of a greenish color corresponding to the contained fluid; the rugæ were much enlarged, especially at the cardiac end; near the pylorus was a small injected spot.

Kidneys: The right measures six inches in length and three in width, and is of a reddish hue; the surface is studded with tubercles; on stripping off the capsules, the larger of these remain with the kidney-structure, while some of the smaller ones are torn off; on section, the cortical substance is seen to have a thickness of about one-third of an inch; numerous foci of softening are seen, of the size of a nickel five-cent piece; there are very many smaller ones, situated mostly in the pyramids; numerous miliary tubercles throughout the substance of the kidney; the foci of softening are evidently due to breaking down of the tubercles; the ureter is dilated, measuring half an inch across in some portions; the mucous membrane is ulcerated; the pelvis of the kidney is not dilated, and shows miliary tubercles.

The left kidney is large, and is converted into five or six cysts; there is but little kidney-substance remaining; the surface of the kidney is studded with a few tubercles; the cysts are lined by a thick leathery membrane, which can be stripped from the kidney-substance; on puncturing the cysts, a perfectly clear serous fluid at first escaped, soon followed by a milky substance containing some cheesy masses; the pelvis is smaller than usual, the ureter entirely occluded.

The supra-renal capsule has undergone degeneration, is of a uniform yellowish-white color, and presents tubercles.

The bladder was slightly contracted, the mucous membrane ulcerated, the muscular coat being exposed; the vesical trigone of a vivid red color and studded with miliary tubercles.

The intestines were found to be normal; no enlargement of lymphatic elements; the mesenteric glands were slightly enlarged; the prostate gland and spleen were not examined.

Prof. William Osler kindly made sections of the kidney and supra-renal capsule, and the reporter is indebted to him for the following report:

First. Extensive, wide-spread, small-celled infiltrations between tubules and Malpighian tufts.

Second. Distinct miliary tubercles, with centrally-placed giant-cells.

Third. Areas of softening and disintegration. Tubercle-bacilli carefully sought for, but only two undoubted specimens found.

Supra-renal capsule showed miliary tubercle with centrally-placed giant-cells.

Dr. FORMAD referred to a similar specimen which had been exhibited by Prof. Tyson at a former meeting of the Society.

Dr. OSLER remarked that Dr. Fussell's case corresponded in all essentials to what we know as tubercular nephritis. The bacilli, however, were scarce and difficult to find. Since the report of Dr. Tyson's case a few weeks ago, he had had occasion to look over the notes of several cases, and found that they formed a complete series, from cases of unilateral disease to instances with tuberculosis of the entire urinary tract and general infection. The condition was not infrequently met with accidentally in persons dead of other affections.

TUBERCLE-BACILLI IN THE URINE.

Dr. OSLER showed a slide of pus from the urine in another case of tuberculous kidney, with the tubercle-bacilli stained.

The President, Dr. SHAKESPEARE, reported a case of

INTESTINAL STRICTURE.

The patient was admitted to the Philadelphia Hospital one week previous to her death, under the care of Dr. Evans, the house-physician. She had obstinate constipation, followed by stercoraceous vomiting. She suffered acutely, lapsed into an unconscious state, and died, all treatment proving ineffectual.

At the autopsy the thoracic organs were found apparently normal. In the right iliac fossa a lobulated tumor was apparent on opening the abdominal cavity. The colon was distended with gas in the transverse portion, and in the descending portion was narrow. The ascending and transverse portions had hardened fæces. There was a double twist of the intestine and two strictures,—one in the ileum, two inches above the ileo-cæcal valve, and one two inches below the valve. They would not admit the finger. There was a ring of hardened tissue in each stricture. There was congestion of the mucous membrane in the small intestine, and adhesion of the first part of the ascending colon on its under surface to the abdominal parietes. The kidneys were normal. A large tumor of the right ovary was also present, attached to the uterus.

Dr. FORMAD, who made the autopsy, remarked that acute peritonitis had in this case become chronic, and that it was the contraction which made the strictures. The cause was probably the abdominal tumor. He was not aware that there was a case on record where a tumor produced stricture. The constriction was due to outside pressure.

NITRO-GLYCERIN is highly praised by Rossbach (*Berl. Klin. Woch.*) as a remedy for contracted kidney. It is usually given in doses of two to three drops of a one-per-cent. solution in alcohol.

REVIEWS AND BOOK NOTICES.

How to Drain a House: Practical Information for Householders. By George E. Waring, Jr., M.Inst.C.E., Consulting Engineer for Sanitary Drainage, Newport, Rhode Island. New York, Henry Holt & Co., 1885. 12mo, cloth, pp. 222. Price, $1.25.

In the growing interest shown by the community in hygienic matters, and the increasing intelligence as to the rational causes of health and disease, there is promise of prospective benefit to the medical profession; for the better the public can be brought to understand problems of health and disease, the more discriminating will it be as regards the intelligence and skill of its medical attendants. Imposture thrives upon ignorance; and it is therefore to the interest of the medical profession to enlighten the people, in order that they may be more exacting in their requirements. The reaction will certainly advance the standard of medical practice.

Colonel Waring's book can be read with interest and profit by all who are interested in domestic hygiene, and it will serve to strengthen the arguments of the medical attendant in cases of needed improvements in houses where typhoid fever or diphtheria exists, or where it is only threatened.

The Formation of Poisons by Micro-Organisms. A Biological Study of the Theory of Germ-Disease. By G. V. Black, M.D., D.D.S. Philadelphia, P. Blakiston, Son & Co., 1884. Pp. 178.

This is a clear, concise, and judicious exposition of the present status of the germ-theory of disease, arranged in the form of lectures, which allow of a more popular and readable method than the ordinary style of the scientific treatise. In an appendix the application of the germ-theory to dental caries is discussed.

A Text-Book of Physiology. By M. Foster, M.A., M.D., F.R.S. Third American from the Fourth and Revised English Edition. With Extensive Notes and Additions by Edward T. Reichert, M.D. With Two Hundred and Seventy-One Illustrations. Philadelphia, Lea Brothers & Co., 1885. Sheep, 12mo, pp. 911.

Foster's Physiology does not need to be introduced to our readers. Its arrangement is very good. Commencing with the study of plasma and the chemistry and physiology of the blood, the contractile tissues, the nervous tissues, and the vascular mechanism are considered in book first; book second takes up the functions of special organs and apparatus; book third, the central nervous system, its instruments and functions, concluding with special muscular mechanisms; while book fourth is devoted to the tissues and mechanisms of reproduction. The work is clearly written, and the illustrations are good. The additions made by Dr. Reichert have considerably enhanced the value of a work which has a recognized position as a text-book having special advantages for students.

A Complete Pronouncing Medical Dictionary, embracing the Terminology of Medicine and the Kindred Sciences, with their Signification, Etymology, and Pronunciation. With an Appendix. By Joseph Thomas, M.D., LL.D. On the Basis of Thomas's Comprehensive Pronouncing Medical Dictionary. Philadelphia, J. B. Lippincott Co., 1886. 8vo, cloth, pp. 844.

This is a handsomely-printed volume of eight hundred and forty-four double-column pages, forming a valuable work of reference. In examining the work it is evident that much learning and labor have been expended upon it in preparing concise definitions, and its etymologies are unusually full. It is planned to include the technology of the kindred sciences, but especial attention has been given to medicine. Its appendices are articles upon Latin phrases and on writing prescriptions, with tables of doses, orders and families of living mammalia, chemical symbols, and metric weights and measures.

NEW REMEDIES AND CLINICAL NOTES.

Treatment of Syphilis by Liebreich's Method.—It is now some time since the employment of subcutaneous injection of hydrargyrum formamidatum was recommended in the treatment of syphilis. The interval has not been misspent by Dr. Carl Kopp, who has brought together the results of his experience in the *Vierteljahr. für Dermatologie und Syphilis*. Altogether three thousand injections were made on one hundred and twenty-six cases, giving an average of twenty-five injections per case. Sixty-five cases were males, and sixty-one females. Fifty-three times the disease was treated while in its primary form. The secondary stages were treated seventy-one times. Only two cases belonged to the tertiary period. The symptoms disappeared under the treatment in ninety-two cases. Thirteen times the injections had to be discontinued on account of untoward effects. In spite of prolonged treatment, eleven cases failed to be benefited by this method. Ten cases were doing well under the treatment, but this was allowed to lapse from some cause or other. Tenderness about the seat of injection was noted altogether sixty-five times; thirty-four times this

subsided in an hour, and in the remainder the tenderness lasted from two to twenty-four hours. Forty-one times an induration developed at the point of puncture. An abscess formed once, in a woman. Salivation and stomatitis were recorded twelve times, eight times in men. The injections were continued for a long period in thirty-nine cases, without any unpleasant after-effects. Universal erythema in a woman, eczema of both lower extremities in a man, and parenchymatous nephritis in a woman were the complications observed during the treatment; but it would be difficult to say what share the injections had in their production.

We append some of the conclusions formulated by Dr. Kopp. Liebreich's preparation is decidedly useful in certain of the milder forms of primary lues, as also for many slight secondaries. The formamide should not be employed in severe cases where there are large papules or thick infiltrations: inunction is still the best method of treating these cases. The tertiary forms are likewise not to be treated by the formamide. Relapses are by no means prevented by Liebreich's method; on the contrary, they appear to be extraordinarily common after this treatment. —*Lancet.*

THE USE OF ANTIMONIALS IN PNEUMONIA AND INFLAMMATION.—D. Leith Napier, M.D. (*Practitioner* for September), states that while children do not bear the antimonials as well as adults, the following "mistura scillæ-salina" has proved of great utility (sometimes combined with a suitable dose of belladonna or hyoscyamus) in the febrile catarrhal condition attending dentition:

Saline Mixture.

℞ Liq. antimonii tart.,
Spts. ætheris nitrosi, āā f℥iij;
Liq. ammon. acet., f℥ij;
Aquam ad f℥viij. M.
Fiat mistura.

Squill Mixture.

℞ Vin. ipecac.,
Vin. antimonii, āā f℥ij;
Syr. scillæ, f℥ij;
Aquam ad f℥viij. M.
Fiat mistura.

These mixtures may be given alone, the first being more generally employed. In some cases the squill mixture is given alone, as in the latter stages of pneumonia; but, as a rule, equal parts of each were used.

The benefits of antimonials are more evident in pneumonia than in other inflammations; but, while Dr. Nias (*Practitioner* for August) follows Trousseau in giving comparatively large doses in the stage of engorgement (not hepatization), Dr. Napier treats the first stages with salicylic acid, antipyrine, or quinine, reserving the antimony for the stage of resolution, except in cases marked by low stamina and great debility.

TREATMENT OF VOMITING OF PREGNANCY.—Two causes are cited by Dr. Morival (*Thèse de Paris*, 1884) to explain the persistent vomiting in some cases of pregnancy: neuræsthenic influence and organic lesions. In treatment, the first effort should be directed towards the discovery of organic lesions, because they may often be relieved with facility. The most frequent are uterine deviations, ulcerations or stenosis of the uterine neck, and perhaps the abnormal adhesions of the membranes. For ulcerations a ten-per-cent. solution of nitrate of silver may be used with advantage. With regard to versions, their reduction should be effected in the horizontal posture, with the hips higher than the head; this postural treatment should be maintained for several weeks. If no apparent lesions are found, resource can be had to medical means, at first anti-nervous,—potassium bromide, belladonna, morphine, applications of ice or of ether spray; then inhalations of oxygen might be tried, or galvanism with a continuous descending current. In all cases stimulants and nutrient enemata should be employed. Should these means fail, digital dilatation by Copeman's method may be resorted to; and, as a last resort, premature delivery should be practised if all other means fail to check the vomiting.—*Bull. Gén. de Thérapeutique*, August 30. (Probably the best remedy for persistent vomiting is cocaine, as suggested by Dr. Bauduy, *New York Medical Journal*, September 26, 1885.)

CONCENTRATED SOLUTIONS OF SALINE CATHARTICS IN DROPSY.—Dr. Matthew Hay, of Edinburgh (who has accepted a chair at Johns Hopkins University), presented a novel method for the treatment of serous effusions in the *Lancet* (April, 1883), the good results of which have been recently reaffirmed by Dr. W. G. Eggleston (*Jour. Amer. Med. Assoc.*, March, 1885). In cardiac dropsy, or pleural or abdominal effusion, abstinence from water and liquid food is enjoined for one day, and on the following morning a comparatively large dose (three ounces) of magnesium sulphate dissolved in two tablespoonfuls of hot water is to be administered. The results which have been reported have been surprising, especially where the saline is repeated on the second morning. Large watery evacuations are obtained, and the effect may be enhanced by the subsequent use of jaborandi (ext. fld. twenty drops), to act upon the skin. This method of treatment deserves further trial by the profession, not forgetting, however, that in children or persons subject to bowel-disorder a serious entero-colitis might be developed. Christison reported a case of a boy who took two ounces

of Epsom salt and died with symptoms of gastro-enteritis without purgation. The hypodermic injection of solution of magnesium sulphate has been advocated in cases of dropsy.

HYDROBROMATE OF HYOSCINE.—Prof. H. C. Wood, in the *Therapeutic Gazette* for September, publishes an additional note upon his experience with the hydrobromate of hyoscine. The dose for an adult he places at one-eightieth of a grain. In spermatorrhœa he believes it to have a specific field of usefulness: thus, in a case in which the discharges were three a week, they were completely arrested by a dose of one-seventy-fifth of a grain at bedtime each night. The effects of the drug do not seem to be very lasting, but they are quite evident during its administration. It was employed in the penitentiary by Dr. Robinson, who reported that its results were surprisingly good. In a case of a woman with eroto-mania its influence was also decidedly beneficial. As a hypnotic it is useful where sleep is prevented by too great cerebral activity, by a succession of thoughts, or where sleep is disturbed by urgent dreams. In intense fever with delirium the hyoscine has seemed to control this symptom. Used hypodermically, in one case it seemed to produce a paralyzing effect upon the pneumogastric nerves; the patient, a woman, had an attack of suffocation, apparently paralytic and laryngeal. The dyspnœa of a child suffering with anginose scarlet fever was much increased after taking the drug, and in the course of an hour or two death resulted, whether from the use of the drug or not is uncertain; but these two cases are sufficient to arouse suspicion.

AMMONIUM CARBONATE IN SCARLET FEVER.—Dr. A. W. Jackson, of Brooklyn, calls attention to the treatment of scarlatina first brought prominently into notice by Dr. Peart, of England. This consists in the administration of from three to seven grains of carbonate of ammonia every hour for the first day, and then at longer intervals. Purgatives are to be avoided during the early stages of the disease. The writer states that he has had occasion to test this mode of treatment, and can endorse it heartily. In addition, he employs the fluid extract of eucalyptus internally and as a gargle. When there is much exudation, a mixture of carbolic acid and iodine in glycerin is painted over the parts. In too rapid recession of the rash, Dr. Jackson applies cloths dipped in thick mustard-water, or wraps the child in blankets wrung out in hot water.—*Medical Record.*

NAPHTHALINE IN CHRONIC INTESTINAL CATARRH.—Dr. P. Selfverskiöld, of Sweden, has employed naphthaline in intestinal catarrh with advantage. To children it may be given in mucilage, and to adults in capsules with a drop or two of ethereal solution of bergamot. The drug should be purified by washing with alcohol and resublimation; of it one or two drachms are given in divided doses during the day. The dose recommended by Pauli was: for children under one year of age, one grain and a half daily; for those of five years, four to five grains. In chronic cases of intestinal catarrh this remedy has proved to be advantageous.—*Lancet.*

QUILLAIA SAPONARIA has been recommended as a substitute for senega by Dr. Kobert (*Centralblatt für Klinische Medizin*). The glucosides contained in senega are found in almost the same proportions in quillaia, which is cheaper, easier to take, and is less expensive than senega. It is best given in a decoction (quillaia, 5 parts; water, 200), of which the usual adult dose is a tablespoonful. Inflammatory conditions of the alimentary canal and gastric ulcer are contraindications against the use of the drug.—*Therap. Gaz.*

PERMANGANATE OF POTASSIUM IN AMENORRHŒA has found a recent advocate in Dr. E. J. Doering, of Chicago. It is administered in capsules midway between meals, and is to be followed by large draughts of some pure mineral water, like Silurian. It is required to be continued for two weeks in doses of from two to four grains several times daily.—*Med. Journ. and Examiner.*

ADMINISTRATION OF PARALDEHYDE.—

℞ Pulv. tragacanth. comp. (Br.), gr. xx;
Syr. aurantii, ʒiv;
Paraldehydis, ʒj;
Sp. chloroformis, ♏xv;
Aquæ, q. s. ad ʒiij. M.

To be given at bedtime in a single dose.—William Craig, M.D., in *Brit. Med. Jour.*

MISCELLANY.

CHANGES OF ADDRESS.—Roberts Bartholow, M.D., has removed his residence and office to 1525–27 Locust Street.

Theophilus Parvin, M.D., has removed to 1718 Walnut Street.

Charles K. Mills, M.D., has removed to 1909 Chestnut Street.

B. F. Baer, M.D., has removed to 2010 Chestnut Street.

J. M. Holland, M.D., has taken an office at 1914 Rittenhouse Square.

THE Address Introductory to the One Hundred and Twentieth Course of Lectures in the Medical Department of the University of Pennsylvania was delivered by Prof. William Osler, M.D., on Thursday, October 1.

The Introductory to the Sixty-first Annual Course of Lectures at the Jefferson College was delivered September 30, at the Hospital of the College, by Prof. J. W. Holland, M.D.

LIEBIG'S BEEF TONIC.—Dr. W. F. Steuart, of the Marine Hospital, Baltimore, Maryland, pronounces "Colden's Liquid Beef Tonic" an excellent invigorator of the system.

NOTES AND QUERIES.

MR. EDITOR,—I trust it will not be considered indelicate if I make an editorial on "The Attitude of the Medical Profession towards Criminals," published in the *Medical Times*, August 22, the subject of some comments. First, I may say that I heartily approve the sentiments there expressed, and, inasmuch as it amounts to a general invitation to the profession for an expression of opinion on "the nature of punishment, its effects upon the individual, and its practicability," a few reflections may not appear out of place.

In New York, as in all large cities, there are each day a number of persons committed to prison for a term varying from a few days to a few months, because of minor offences against the law. Now, the treatment of this class of prisoners must necessarily differ somewhat from that of criminals consigned to the penitentiary for one or more years. In the case of the latter the term of imprisonment is sufficiently long to admit of a course of discipline which may be considered as not only punitory to the individual, but also as tending to improve his moral and perhaps physical state. His imprisonment, in other words, can be made a graded school of moral and physical training. The great length of time for which the person is to be confined, aside from any other consideration, would necessarily make him feel that he was undergoing a punishment. No tramp, however low his condition, it may be safe to say, would voluntarily commit a crime with the hope of finding in the walls of such a prison a comfortable home, sheltered from the storms of an inclement season.

My impression is that the greatest evil arising from modern sentimental prison reform is the influence which it has upon persons who contemplate doing acts for which they will be liable to be imprisoned for only a few days or months. Many of this class of persons are lazy, filthy, habitually addicted to drink and bad food, and perhaps to sleeping out of doors. Their self-respect is not so great as to make them feel ashamed of being sent to "the island" (a term synonymous in New York with the prison). Now, what sort of punishment would it be for one of these persons—who had, for instance, without provocation insulted a lady and broken a gentleman's nose—to be taken out of the cold and dirty streets and sent to a prison for a few weeks or months, where he would be accommodated with a warm cell, a decent bed, perhaps provided with a clean suit of clothes, given good food and medical care, and allowed to lie in idleness, or at least not compelled to do a sufficient amount of labor to pay for half the expense the city had incurred in feeding and sheltering him in his new home? There are two important facts to be taken into consideration in dealing with violators of the law, aside from but intimately connected with the protection of the state,—namely, the treatment of the transgressor in a manner to make him feel that he is being punished, while at the same time improving him morally. The mere fact of his being a transgressor of the law shows that he is morally defective. Now, it is just the compelling him to do such things or to undergo such restrictions as will develop this that will be regarded by him as the greatest punishment. Now, cleanliness and a proper supply of wholesome food and exercise are not opposed to morality, but the contrary. The violator of the law should be compelled to keep himself clean, to earn his own food, and to obtain exercise by doing such work as may be assigned to him to do. What greater punishment to the law-breaker, consistent with Christian doctrine, than to take from him his liberty, make him live soberly, and compel him to labor? The tramp dislikes nothing more than labor and restraint. The petty thief, as well as the bank-robber, has obtained this title because of a dislike for honest labor. The woman-beater would rather do anything else than to embrace the whipping-post or be confined and compelled to break stone or delve in the earth. Honest industry and living without many of the luxuries of life are generally distasteful to all habitual violators of law, especially so when observed under compulsion. Yet this is the lot to which the majority of men are of necessity subjected,—men who really constitute the power of the state. Why, then, should evil-doers, who are practically a nuisance to the community, be exempted from that to which Providence has called the best of mankind, and which to this evil class is the greatest of punishments while it is at the same time of benefit to the state? The addition of filth and unwholesome surroundings in prison-life would be a punishment only to the decent man who had accidentally got himself into the clutches of the law, and for whom restraint and hard physical labor would be sufficient to bring about repentance. For the habitual violator of social order and decency such surroundings would simply be a continuation of that to which he was habituated. But if he were himself compelled to do his own cleaning in addition to his other daily labors, it would be to him a punishment, while at the same time to his own advantage and that of his fellow-prisoners. These persons sent to prison for only a short time could not of course be expected to learn a trade, as some do who are sentenced for years. Certainly this would not be as great a punishment as if they were compelled to do farm or agricultural work. If there were no opportunity to labor at farm-work, there could always be an opportunity to break stone or work on public improvements. No man should be allowed to board and obtain superior diet, or shirk his duties, by paying the warden an extra fee. Ferdinand Ward, who it is claimed nearly ruined the Grant family, it is said is enabled to live in jail like a prince by paying the warden seventy-five dollars a week from his stolen money.

It is true that some opposition has been manifested towards prison-labor on the supposition that it depreciates the value of work done by honest citizens. But this is the view of the politician and individual, not of the statesman and nation. It could not be expected if I were a shoemaker, and should go to a town where there was but one other shoemaker, that he would welcome me as a rival; but the citizens in general would be glad to have me settle among them and ply my trade, especially so if in not plying my trade they should be compelled to support me gratuitously out of their own daily earnings. The same should be true of prison-labor. If prisoners do not work, then we must take bread from the mouths of our children and give them to eat without being recompensed. But he who produces more than he consumes becomes the servant of the people, or makes the state his debtor. If the tramp does not dread such prison-life, but prefers to be "sent up" for ten days to sleeping out in the cold, the public will not object, so long as they know that while there he is earning them bread and butter and giving them a day of rest.

Thus far only a portion of the questions suggested in the editorial referred to have been touched upon. Perhaps some time in the future I will take the liberty of expressing some ideas regarding the ability of specialists to declare upon the sanity or insanity, responsibility or irresponsibility, of criminals. Space will not admit of it at present.

Truly yours,

R. C. SHULTZ.

NEW YORK, September 3, 1885.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 13, 1885, TO SEPTEMBER 26, 1885.

COLONEL JOHN CAMPBELL, SURGEON.—Retired from active service September 16, 1885. S. O. 212, A. G. O., September 16, 1885.

PROMOTIONS.

LIEUTENANT-COLONEL T. A. MCPARLIN, ASSISTANT MEDICAL PURVEYOR.—To be Surgeon, with rank of Colonel, to date from September 16, 1885.

MAJOR B. J. D. IRWIN, SURGEON.—To be Assistant Medical Purveyor, with rank of Lieutenant Colonel, to date from September 16, 1885.

CAPTAIN B. F. POPE, ASSISTANT-SURGEON.—To be Surgeon, with rank of Major, to date from September 16, 1885.

APPOINTMENT.

EDWARD R. MORRIS.—To be Assistant-Surgeon, with rank of First-Lieutenant, to date from September 17, 1885.

CAPTAIN F. C. AINSWORTH, ASSISTANT-SURGEON.—From Department of Texas to New York City, for duty as member of the Army Medical Examining Board. S. O. 214, A. G. O., September 18, 1885.

CAPTAIN G. W. ADAIR, ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 104, Department of Dakota, September 18, 1885.

CAPTAIN WILLIAM C. SHANNON, ASSISTANT-SURGEON.—Granted leave of absence for four months, to take effect about October 1. S. O. 215, A. G. O., September 19, 1885.

FIRST-LIEUTENANT GEORGE E. BUSHNELL, ASSISTANT-SURGEON.—Ordered from Department of Dakota to Department of the East. S. O. 219, A. G. O., September 24, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM SEPTEMBER 13, 1885, TO SEPTEMBER 26, 1885.

MURRAY, J. M., PASSED ASSISTANT-SURGEON.—Resignation accepted, to take effect January 1, 1886.

ROSS, J. W., SURGEON.—To special duty at New York.

DUNGAN, J. S., MEDICAL DIRECTOR.—Waiting orders.